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ORIGINAL COMMUNICATIONS.

HEPATIC ABSCESS.

BY P. GERVAIS ROBINSON, M. D., *Professor of the Practice of Medicine and Clinical Medicine in the Missouri Medical College, St. Louis, Mo.*

NO single organ in the body possesses a greater degree of interest for the practitioner and student of medicine than the liver, holding, as it does, varied and multitudinous relations to other organs and their several functions, as well pathologically as physiologically. So essential are its functions, diverse as they are now known to be, to the processes of nutrition and repair, that any disturbance whatsoever of its healthful action, whether consisting simply in transient derangement (functional), or in permanent tissue changes (organic), declares itself by a multitude of phenomena, which are neither constant nor uniform, by reason of these varied connections and relations.

So, at one time the symptoms occurring may point most prominently to the digestive system as the seat of disease, at another to the circulatory, at another to the excretory, as the kidneys or the skin, and at another, even to the nervous system, and especially its cerebro-spinal centers.

Admitting that we have learned much concerning the

functions of the liver, and that its intimate relations to nutrition have, of late years, been better understood and more firmly established, and further, that the morbid histological changes occurring in its several pathological states have been clearly demonstrated through microscopic research, we are yet constrained to the recognition of the fact that no such advance has been made in the clinical features of its diseases, nor has any satisfactory degree of accuracy been attained in fixing the connection between certain phenomena we call symptoms, the effect of its diseased action, and the nature of that disease, whether organic or purely functional.

Hence it is, that in the whole field of practical medicine there is no one class of diseases which presents such obstacles to their thorough understanding, to their differentiation, to their individual recognition and certain diagnosis, as affections of the liver; and the most acute observer, the most skillful practitioner, is at times forced to the admission that he can assert nothing more positive than that there exists hepatic disturbance. The boundary line between simple congestion and real inflammation is often so indefinite, either condition giving rise to the same group of symptoms, that a confident diagnosis must be delayed until the results have made manifest the conditions upon which they depend, often until such time as therapeutic efforts shall have been deprived of half their value, or have even become totally vain and impotent.

These remarks are especially applicable to that form of hepatitis which results in the formation of purulent matter in the substance of the liver, and, as Flint declares—"Clinically, the existence of this variety of the disease is generally not known until suppuration has taken place, and an abscess is ascertained, either by manual exploration or by the escape of pus from some outlet into which it is discharged."

A recent article on "Obscure Abscesses of the Liver; their Association with Hypochondria and their Treatment," by Prof. Wm. A. Hammond, has excited a renewed interest

in the subject, and demands our attention, not only from the extraordinary results of treatment, but from the asserted connection between the presence of abscess in the liver and certain Psychical disturbances (hypochondria) which it is claimed are so constant, infallible and significant as to justify us in the surgical procedure which constitutes the mode of treatment advocated.

As a contribution to the literature of the subject, I offer the following series of cases, which show no such obscurity as to the existence of abscesses; no such difficulties in the diagnosis; no such association with mental disturbance, and no such success in their treatment by the same mode of procedure.

The notes of these cases, which have occurred during the last two and a half years at the City Hospital (several being in our clinic), have been kindly furnished me by Dr. D. V. Dean, Resident Physician in charge, as also the accompanying table.

CITY HOSPITAL, ST. LOUIS, Dec. 20, 1878.

Dr. P. G. Robinson :

MY DEAR SIR—The following table and histories of the cases diagnosticated or known, *ante* or *post mortem*, to be hepatic abscesses, and treated during my charge of the hospital, from May 1, 1876, until the present time, are as full and accurate as I am able to make them with the histories as preserved, with my memory or recollection, and with the limited time I have to refresh the latter through inquiries among those who have been from time to time cognizant of them. Some of the patients have been two or more times in the hospital, and the hepatic abscesses have occurred or been observed only after readmission; but to save room in the tables, only the time of first entrance into the hospital and date of death, or of the patients' going from under our observation, have been recorded therein. All of the cases have, in so far as can be ascertained, originated within the dates here specified, viz: May 1, '76, to Dec. 20, '78.

Among the prominent characteristics of the group are—

The frequency of cases.

The entire absence of jaundice in the idiopathic cases, except Case VIII., where the grounds of diagnosis of abscess were not positive.

The inoffensiveness of the pus in every case, at first.

The short, known, duration of the cases.

The age and sex—all the cases being men of middle age, not less than twenty-five nor more than fifty-four years of age. The hospital is limited to about sixteen female patients, but these are quite likely to be severe cases.

Nativities of patients of wide range, but most of them having resided in St. Louis for several years.

Malarial influences and dysentery in the order named, and sometimes, perhaps, concussions, blows or injuries, seem to have been prodromic, if they did not cause the abscess; at least the affections can scarcely be looked upon as simply concurrent. One of the patients had worked in lead and one in zinc works.

The harmlessness of aspiration, no bad results being attributable to it in any case; its value as a diagnostic measure, and its insufficiency as a general means of cure in cases as they come to the physician, the abscesses requiring drainage-tubes or larger openings, maintained for some time, unless, indeed, a more vigorous and frequent use is made with the instrument and repeated washing-out to prevent the necessity of a spontaneous or operative opening.

The frequency of multiple abscesses that cannot be dinosed, and, therefore, are not reached, or, if they could be, have already caused such a drain upon the system, and have caused such general destruction of the liver substance that this organ cannot sufficiently perform its functions to play its part in maintaing life, and the patient cannot be cured nor the abscess healed.

I am, very respectfully,

D. V. Dean, M. D., Sup't.

I. Charles Grider. Ten days after an exposure occurring March 1, 1873, there came a "hard, dry sore" on the dorsum of corona glandis. This was "burnt," and

healed readily. August 1, 1873, had an eruption over the body, and the last of April a sore throat. The eruption "cleared up" February, 1874. From this time until admitted to hospital—Dec. 19, 1875,—patient had a bad discharge from the nose, without discharge of bones, and pain in the bones, worse at the approach of damp or wet weather, but not, so far as he knows, worse at night. On assuming charge of the hospital, May 1, 1876, I found patient in this condition, his face covered with large cicatrices, exceedingly red, a large gummy node on the outer side of left leg. He was discharged, for improper conduct, June 14, 1876.

June 22, 1876.—Readmitted on probation. Has aortic obstruction, and is in bad general condition; face blotched, and in appearance simulating seborrhœa. A considerable tumor is now noticeable nearly upon the median line, but apparently continuous with the liver. Is not fluctuating or pointed, nor is it painful. Is possibly a gummy tumor of the connective tissues, but probably of the liver. Tumor of left leg not materially changed. Oct. 1.—Patient has taken mercurial vapor baths once in five days. Has taken about an ounce, a day, of potassium iodide. Skin pretty clear. Tumor softer, less doughy, hardly fluctuating, smaller, thought to be softened in its center.

Jan. 6, '77.—Discharged for cause; tumor nearly or quite disappeared; general health much improved. Tumor of left leg, which had ulcerated, has nearly disappeared; ulcer healed. Aug. 8, '77.—Readmitted, somewhat run down; no appearance of tumor of liver. March 4, '78.—Discharged, improved. May 22, '78.—Readmitted; general debility, the result of his syphilitic, broken down condition. No tumor noticeable. June 3, '78.—Discharged, improved.

II. Paul Langer. Has had chills and fever every fall for the last thirteen years. Last attack occurred last September. Has been a hard drinker for the last four years, though he has not drank so hard the last two years as the previous two. Two years ago had pneumonia at Quarantine. Has been pretty healthy since, until September last, when he had a chill, followed by fever and profuse perspiration every day for two weeks, and then convalesced.

Four weeks ago noticed a stinging pain in his right side. Had no fever, gastric or other trouble, except weakness. Four days before entering hospital he noticed a swelling and tenderness in the region of his stomach, and had sleepless nights. When admitted to the hospital there

was a marked fullness of the epigastric and hypochondriac regions, and a tumor, with smooth surface, in the place of the anterior portion of the right lobe of the liver could be felt, the central portion of which seemed adherent to the skin. On deeper pressure the outlines of the tumor could be traced to near the umbilicus. No apparent constitutional disturbance, bowels regular, appetite fair, pulse 60, temperature 36.4° C.

Dec. 25.—Fluctuation in central portion of tumor noticed. 26th.—Increase of fluctuation, with redness and puffing of integument an inch and a quarter in diameter. 27th.—Tumor seemed smaller, pointing, and fluctuation more marked—now only slightly painful on pressure. Sleep good, appetite fair. 28th.—Tumor still decreasing in size, fluctuation in central elevation less evident. 29th.—Tumor still decreasing and fluctuation confined within a distinct ring, the circumference of a silver half-dollar. Aspiration was intended, but owing to my absence it was postponed. 31st.—Former fluctuating part indurated, with diminution of size. Jan. 7, '77.—Tumor disappeared; no soreness on moderate pressure. 9th.—Complaining of some pain in left lumbar region, sharp, sudden and intermittent. 10th.—Pains less, and only during the past night. 11th.—No pain; feels perfectly well. Discharged at his own request. Was not confined to his bed during his whole stay in the hospital.

III. Thomas White. Except that he was injured in the left side by an elevator four years ago, and was unable to work for about thirteen weeks, he was always healthy until last September, when he was taken with vomiting and purging, which lasted seven days. This was followed by chills and fever every other day, which were stopped in a few days. Had diarrhœa from the first to the present time. About Christmas he noticed a swelling in the epigastric region, which has increased up to the present time.

Feb. 28.—Fluctuation of the tumor, real or imaginary. On consultation with Dr. Hodgen, it was decided to aspirate it, which he did, drawing off six oz. of serosanguinolent pus of inoffensive odor. March 3d.—Tumor as large as before. Dr. H. drew off eight oz. of bloody pus. 4th.—Had four loose stools last night; temp., 36.4° C.; feels very comfortable. 9th.—Tumor having refilled, I drew off six oz. of somewhat offensive pus, and injected two ounces of solution of chloral, gr. v. to f℥i., and drew it off again. 11th.—Reddening of the skin at point of tumor, the size of a silver half dollar. From this time until about May, I

believe, pus exuded from time to time in considerable quantities through the unclosed openings made by the aspirator needle, which were either enlarged by the knife or spontaneously, I do not remember which.

May 10th.—Patient expectorates pus freely, and pus has ceased to exude from the opening. 24th.—No more discharge from the abscess, and patient, feeling well, is discharged at his own request.

IV. Frederick Mayer (Case reported by me with that of a colored woman, native of U. S., in St. Louis Med. and Surg. Journal for August, 1877, p. 420; these two cases being, so far as I know, the only ones of the kind published in this country). Though previously well, had small-pox in 1872, and in 1873, while working in a lead factory, had gastric trouble and constipation, followed by diarrhœa, the stools containing blood, and was treated for lead colic. In October, 1876, while working in a brewery, and often going from warm to cold parts of the building, he had a cough, some difficulty of breathing, sleepiness during the day and sleeplessness during the night, caused as he supposed, by a cold caught by his exposures. Dec. 1st.—Noticed a swelling in abdomen, free from pain, and small papules on both legs. Feet commenced swelling in April. May 1st.—Patient felt as if something had given way in his stomach, and immediately thereafter vomited a large quantity of black clotted blood, mixed with mucus and undigested food.

At time of entrance, (May 11th) abdomen greatly swollen, the superficial veins enlarged, some ascites. Liver dullness extended from right nipple down to the umbilicus. It formed a prominence, with borders readily felt, and somewhat nodulated upon its surface. Patient intensely jaundiced, lower limbs swollen, scrotum infiltrated and œdematous. May 23d.—Suffers intense pain, very short breathed, abdomen very tense. Paracentesis—two gallons of straw-colored fluid drawn, giving immediate relief. The puncture remained open, the fluid draining freely away until about June 1st, when it had closed, and the accumulation had so increased that one and a half gallons were drawn off. Patient sank gradually until June 4th, when he died. *Post-mortem*—Pleuritic adhesion on both sides, lungs congested. Abdomen partially filled with straw-colored fluid. Liver adherent to all adjacent parts of abdominal wall; twice the normal size, nodulated all over the surface, the nodules occupied by alveolæ filled with jelly-like substance. Cavity in right lobe as large as a man's head,

filled with serous fluid, broken down liver tissue, bile and blood. Liver substance nearly obliterated—weight, ten pounds three ounces. Kidneys and spleen normal. For microscopic structure I refer to the report mentioned above.

V. Miles Howell. "Had typhus fever in 1868, for six weeks." Thinks he has been bilious occasionally for the last few years. Has been a hard drinker at times in his life, but has not been a constant drinker. Disclaims ever having had venereal disease. The first of May last, had a diarrhœa, which came on suddenly. Had much pain and griping in the bowels, with greenish, slimy stools, without blood. Had no fever at that time, but has lately been having fever and sweats at night.

On admission, patient had light fever, with tenderness and pain on pressure, over the whole colon. Aug. 24.—Has had fever all along. Has received cinchonidia, iron and opium. A few days ago an enlargement of the liver was first detected, and to-day there is perceptible enlargement in the region of the spleen, but the tumor is more prominent in the epigastric region.

Aug. 29th.—Tumor aspirated, and six oz. of odorless pus drawn off. 30th.—Death. *Post-mortem* revealed thirteen abscesses in the liver, and perforation of abscesses into the colon and duodenum.

VI. Richard Gale. Had gonorrhœa eighteen years ago, and a suppurating bubo seventeen years ago. Does not know of having syphilis. Has had piles for the last twelve years; they have bled occasionally. In spring of 1875, patient first noticed swelling in abdomen, which continued for a year, when legs began to swell. For the past six months swelling of abdomen has greatly increased. About sixteen years ago had easy access to brandy, and took two to four drinks daily for four years. Was tapped late in July and August 15th, each time about four gallons of fluid being drawn. At present ascites; spleen much enlarged, liver small. Has heart murmurs, mitral and aortic. Aug. 31st, Sept. 22d, Oct. 16th.—Paracentesis, and each time about six gallons of fluid drawn off.

Oct. 28th.—Death. Autopsy—Spleen carnified; liver the ordinary size, and weighing twenty-four oz. Deposits in mitral and aortic valves. Liver cirrhosed, weighing forty-one oz., filled with gummy tumors, two larger of which were softened or abscess-like in their center.

VII. Patrick Darcey. Always had good health until June, 1876, when he had intermittent fever for two months.

He remained well until May last, when he had intermittent fever, accompanied during June by diarrhœa. Late in June both ceased, leaving patient very weak, and confined to his bed. About July 8th he was troubled with severe pains in the region of the liver, radiating in every direction, especially toward the right shoulder, and had pain in his legs. For awhile could not lie on his left side. He found his abdomen swollen across its upper portion, and a particularly tender spot in the right hypochondriac region. The middle of July the swelling had reached its largest size, and was very painful, when Dr. O'Reilly applied caustic at the tender point, and dressed with a poultice. For three weeks there was some discharge from this opening, and the pain and size of tumor both diminished.

On entering the hospital the integument had closed over the tumor. Patient has good appetite; no vomiting; occasional, not constant, pains; looks anæmic and slightly icterous. The spleen is enlarged and crowded up into the left side of chest.

Sept. 20th.—Refuses to have the tumor opened by knife or aspirator needle, and is discharged at his own request. Nov. 24th.—Readmitted. Patient says, Oct. 10th the tumor opened at the old seat and evacuated a large quantity of pus.

Jan. 12, 1878.—Death. Pus has been discharging from the opening ever since the patient's admission.

Post-mortem.—Right lobe of liver adherent to the diaphragm above, and to the ribs and costal cartilages, from the sixth to the eleventh rib, in front. Abscess occupied about one-half the right lobe. The opening of the common duct into the duodenum could not be found.

VIII. Conrad Doniat. Nov. 19th patient vomited and had sharp pains in region of epigastrium. Three days later had chills, followed by fever and sweats at night, these recurring thereafter irregularly, and the patient becoming jaundiced. At present patient has non-fluctuating tumor in region of right lobe of liver, which he noticed about six days after he first felt the pains. Has an irritable cough, but lungs appear normal on auscultation and percussion. Jan. 15, 1878.—No tumor discoverable, and patient discharged (apparently well) for purloining food to distribute to patients.

IX. August Wahlert. Previously to six weeks ago, healthy. Was then exposed during a rain-storm, took cold, and had chills. Had a cough and sharp pain in right

side. Spits icterous pus. Right lung dull, with sub-crepitant râle. Aug. 3d.—Death. *Post-mortem.*—Chronic pneumonia and hepatic abscess. Whether liver was adherent to diaphragm was not recorded.

X. Wm. Brady. Healthy until six months ago, when he had chills and fever for a week, followed by diarrhœa and dysentery, which lasted for six weeks. Was taken two weeks ago with a chill, followed by fever, and a pain in right side in region of the liver. Has circumscribed enlargement at seat of pain, and tenderness. Jan. 21st.—Discharged at his own request, unimproved.

XI. Barney Shinstock. Though subject to bilious troubles from time to time, as he believes, he was always of fair health until about a month before admission to hospital, when he was taken with a severe pain in the region of the liver, the pain having continued to the present time. Patient has now a fluctuating tumor of the right lobe of the liver. June 7th.—I drew off with the aspirator nearly eight ounces of inodorous, creamy pus, using the spray and Lister's antiseptic dressing. June (?)—Again aspirated, and injected solution of chloral and drew it off. Aug. 5th.—Patient discharged at his own request, and against my advice, though he feels pretty well. Aug. 27th.—Readmitted. Complains of severe pain in side, has considerable fever, some fluctuation at summit of abscess, and a light discharge at the seat of previous punctures with aspirator needle. Discharge became serous, finally ceased, opening healed, and patient was discharged, feeling well, Sept. 16th.

At this writing, (Dec. 7th, 3:35 p. m.), patient is again readmitted. Since leaving the hospital he has been continually engaged in setting up brick, which is a matter of considerable exertion, the brick being pitched, and he having to catch them. Represents that he had a hæmorrhage from the lungs, amounting to a pint, but physical examination gives no evidence of such an occurrence. The only symptoms point to pleurodynia, or intercostal, neuralgia of left side. Dec. 8th.—Dr. P. G. Robinson examined the case; otherwise than that there is dullness extending somewhat, which changes, however, with change of position of patient, there seems to be no hepatic lesion. There is at this date no constitutional disturbance, nor local trouble which can be attributed to the liver. The needle wounds are, and have remained, perfectly healed; patient has gained in weight, perhaps twenty pounds, in strength and general appearance.

XII. James Ryan. Patient has always considered himself a generally healthy man. Has had syphilis and rheumatism. About two years ago he was run over by a hand-car, which went over his right side in right hypochondriac region. For three weeks previous to admission into the hospital had fever "off and on" with dysentery. Has had no movement of the bowels for the last few days "amounting to anything." Has pain in right hypochondrium, extending downward and into the left inguinal region. July 11th.—Patient vomiting greenish matter. There is a slight crepitation in region of liver, which organ appears larger than normal, but drawn up by adhesions—certainly it is not crowded up. Has constant pain in right shoulder. Sept. 4th.—On consultation with Dr. P. G. Robinson, abscess of the liver is diagnosticated, and we conclude to aspirate, which he does, drawing off about a quart of pus, of inoffensive smell. Patient weak and failing. Sept. 17th.—Patient died, the intention to aspirate again not having been carried out.

XIII. Joseph Ruffenach. Says he was taken ill June 9th. Had burning about the anus, and afterward pain in abdomen, and pain and straining at stool, when he passed much blood and slime. He was treated in this hospital for dysentery from July 23d to Aug. 27th, when he left of his own accord. Sept. 5th.—Readmitted; now having twenty to twenty-five operations in twenty-four hours. Œdema of feet and penis. Systolic and diastolic murmurs. Abdomen swollen. Tumor over left lobe of liver, near median line, giving patient great pain, and is soft and fluctuating. Is very weak and emaciated. Sept. 6.—On consultation with Dr. P. G. Robinson, patient, who was sinking rapidly, was aspirated; about eight ounces of thick, inodorous pus withdrawn. Patient continues to sink. Sept. 9th.—Abscess refilled to its former dimensions. Death. No *post-mortem.*

XIV. Wm. Strassburg. Has been sick about three weeks. Has been much troubled with piles. Has dysenteric stools, accompanied with much straining. Has had a very irritable stomach for over a year. No fever, no tenderness over any part of abdomen, unless on deep pressure, when all parts seem tender. Aug. 9th.—Death. *Post-mortem.*—Acute dysentery, chronic gastric catarrh, and hepatic abscess.

XV. Philip Maguire. Suffered from dysentery at time of admission. No history preserved, and the basis of

the diagnosis, or whether it was made out *post mortem* cannot be recalled.

XVI. George Harris (colored). Patient was in the hospital and treated for diarrhœa from Sept. 5th until Sept. 18th, when he was discharged, apparently well, no other trouble having been suspected, though a general physical examination was not made. On readmission (Sept. 28th) he had a painful fluctuating tumor of the right lobe of the liver, which he believed commenced Sept. 14th, while in the hospital before. At that time he was accidentally hit in this region by the foot of a fellow patient, who made a quick turn in his delirium in bed. At any rate he had no pain there before, but had it from that time on, and the swelling came on, he thinks, after the blow. Sept. 29th.—Decided to aspirate or open the abscess next morning; patient very weak. Sept. 30th.—Found patient too weak and far gone for any good to come of aspiration. 10:20 A. M.—Death. Abscess contained a greenish yellow pus, without offensive odor. This was made by a puncture with the knife; no further examination was made, the patient having been removed for burial before I was aware of the fact that an autopsy had not been made.

XVII. Owen Clark. Previously comparatively healthy. Has suffered with chills and dysentery for some time. Has pain in the region of the liver. Large tumor to the right of the median line at seat of right lobe of liver; distinct fluctuation; no jaundice. Sept. 6th.—On examining the patient with Dr. Friedman, decided to aspirate, which I did with his assistance, withdrawing about twenty-eight ounces of inoffensive smelling pus. Patient much relieved; improved for some days. Sept. 19th.—Abscess has refilled. Aspirator needle introduced by Dr. Lankford, before the class, and about sixteen ounces of pus withdrawn, odor inoffensive. Oct. 7th.—Patient has been failing for some days. Oct. 8th.—Death. *Post-mortem* showed abscess four inches in diameter in right lobe, and of considerable size in left lobe, and one two and a half by three inches posteriorly in left lobe.

XVIII. Charles Wright. On admission patient was having thirty-five to forty slightly bloody stools a day. Previous history not obtained. Oct. 30th.—About twenty stools a day. 25th.—Has been having chills, and pain and tenderness on pressure in right hyporgastric region since the 20th. Forming abscess of the liver suspected; no appreciable enlargement. Dec. 10th.—Patient continues to run down and

emaciate, no form of treatment having a permanent effect. Has hiccough. Dec. 12.—Still has hiccough. Very hopeful, though fast failing. No marked enlargement of liver or fluctuation observable; tenderness over the large intestine, but not over the liver. No jaundice. Dec. 15th.—Death. *Post-mortem.*—Large intestine showed the usual inflammatory thickening and changes of the mucous membrane in chronic dysentery. The liver but slightly enlarged. In the posterior portion of the right lobe was an abscess the size of a man's fist. Scattered through the liver were various abscesses, from the size of a hen's egg to that of a hickory nut, but they were not connected. The pus was creamy in consistence, but not offensive in odor.

XIX. George Lehmann. With the exception of having typhoid fever nine years ago, patient had not been sick in twelve years until near September, 1877, when he had intermittent fever for six weeks. Three weeks after being cured of his chills, he had dysentery, which was very severe the first three days, but lighter thereafter, ceasing in eight or nine days from the beginning.

About the 1st of September, 1878, he "took a cold," he thought, while driving team. Sept. 3d, while reading his paper, he was suddenly seized with a severe pain in the region of the right lobe of the liver. He had, within twenty-four hours, three severe chills, accompanied by great pain in the right side, and followed by fever and profuse sweats. In the next twenty-four hours he had three such paroxysms, with less pain. His pain grew worse, coming and going, but being sometimes very agonizing, and extending down toward the small of his back, especially on the right side. His chills came regularly every seventh day, and were followed by fever and profuse perspiration from the second day of his attack, and he did not leave his bed, except for a chair, up to the time of admission to the hospital. During this time he was unable to lie, except on his right side. No pain in right shoulder. "Food did not agree with his stomach," and he was nauseated by it. Had not eaten for several days when admitted.

Dec. 12, 1878.—At this time he was semi-conscious, and no anamnesis could be obtained. He cringed when pressure was made over the liver. There was no ascites; the abdominal walls thick and flabby. Anterior border of liver not perceptibly lower than normal, but percussion showed the right lobe to extend upward to the third rib. No fluctuation could be detected.

The previous history was afterward obtained from his wife and friends. Patient had not been a hard drinker,

but had kept saloon, and had drank harder before than during the last three years. He had been constantly constipated for some time. Had never been jaundiced.

Dec. 18th.—Death. *Post-mortem.*—Fat of the abdominal wall an inch and a half thick, though the patient was emaciated. Heart very fatty, and pericardial sac presented the appearance of leaf-fat. Omentum and adipose capsule of kidneys very fat. Anterior two-thirds of the right lobe of the liver occupied by an abscess containing a quart and a half of light reddish pus, not at all fetid, and shown under the microscope to contain blood corpuscles. The right lobe was everywhere adherent, and the abscess bulged downward by the side of the kidneys. Liver cirrhosed. Kidneys normal. Spleen enlarged.

XX. August Ristan. Patient came from Germany to La Salle, Ill., a year and a half before coming to St. Louis, and worked in zinc works there during that time. Since coming to the city has followed the same occupation. Was always healthy until April 9th, 1878, when he had diarrhœa three weeks, having to go to stool every half hour during nearly the whole time. Dec. 19, '78.—Patient says that a little over two months ago he had pain in the right side of the chest, which "went down two months ago to his right side below the ribs." Had no fever or chills. Had pain in right shoulder; could lie only on right side or in a semi-supine position on that side. His appetite is poor, and his bowels are very constipated. Patient has a tumor in right hypochondriac region, extending about two inches below the twelfth rib; just about this point fluctuation can barely be felt. Dullness extends upward to the lower border of the fourth rib, and from sternum to spine. Vocal fremitus distinct above the fourth rib, and pleuritic friction sounds are heard. Heart sounds normal. No jaundice. I decided to aspirate, but deferred the operation until the afternoon of the 20th, when it was done before the class of the St. Louis Medical College, about eighteen ounces of sanguinolent pus of inoffensive odor being withdrawn; patient soon after expressed himself as feeling easier, and walked to the urinal and back. Schreds of broken connective tissue adhered to the openings of the needle when it was withdrawn, and of such size as to indicate the probable necessity of a larger opening for the undissolved dead tissues.

It will be seen from the table that several of these cases were not such, perhaps, as ought rightly to be classed as abscess of the liver, as, for example, cases one, four and

TABULATED STATEMENT OF TWENTY CASES OF HEPATIC ABSCESS,—SEE TEXT—OCCURRING AT THE ST. LOUIS CITY HOSPITAL, COMPILED DECEMBER 20, 1878, BY D. V. DEAN, M. D., PHYSICIAN IN CHARGE.

NAME.	Age in years.	NATIVITY.	OCCUPATION.	TIME IN CITY.	DATE OF ADMISSION.	DISEASE.	COMPLICATIONS OR SUPPOSED CAUSE.	SUPPOSED DATE OF BEGINNING OF ABSCESS.	OPERATION. NO. OF TIMES	RESULT.	DATE.	REMARKS.
I. Charles Grider	33	Indiana	Laborer	3 years	Dec. 14, 1875	Hepatic abscess, Gummy tumor.	Syphilis	June, 1876		Improv'd	June 3, 1878	Disch'd
II. Paul Langer	24	Germany	Teamster	17 years	Dec. 22, 1876	Hepatic abscess	Int. fever	Pain, Nov. 22, 1876, Swelling, Dec. 2, 1876.		Recovery	June 11, 1877	Disch'd
III. Thomas White	40	Ireland	Laborer	10 years	Feb'y 26, 1877	Hepatic abscess	Int. fever, diarrhœa, inj'y to liv'r	Swelling, Dec., 1876	Aspirated 3	Recovery	May 24, 1877	Disch'd
IV. Frederick Mayer	39	Bavaria	Blacksmith	10 years	May 11, 1877.	Echinococcus multilocularis, hepatic abscess		Oct., 1876, Swelling, Dec., 1876.		Death	June 4, 1877.	
V. Miles Howell	35	England	Shoemaker	8 years	Aug. 8, 1877.	Hepatic abscess, (multiple)	Int. fever, Diarrhœa.	Swelling, Aug. 20, 1877	Aspirated 1	Death	Aug. 30, 1877	
VI. Richard Gale	34	England	Laborer	1 day	Aug. 25, 1877.	Gummy tumors, multiple. Hepatic abscess.	Syphilis, Cirrhosis of liver	Swelling, spring, 1875.		Death	Oct. 28, 1877	
VII. Patrick Darcey	25	Ireland	Laborer	5 years	Sept. 11, 1877	Hepatic abscess	Int. fever, Diarrhœa.	Pain, July, 1877, Swelling, July, 1877.	Cauterized 1	Death	Jan'y 12, 1878	
VIII. Conrad Doniat	27	Germany	Painter	2 years	Dec. 4, 1877.	Hepatic abscess	Chills and fever	Pain, Nov. 19, 1877, Swelling, Nov. 28, 1877.		Recovery	Jan'y 15, 1878	Disch'd
IX. August Wahlert	54	Germany	Reporter	15 years	Jan'y 3, 1878.	Hepatic abscess	Chills, pneumonia	Pain, Nov. 15, 1878		Death	April 3, 1878.	
X. William Brady	34	Ireland	Laborer	7 years	Jan'y 10, 1878	Hepatic abscess	Chills, diarrhœa, dysentery.	Pain, Dec. 27, 1878		Not imp'd	Jan'y 21, 1878	Disch'd
XI. Barney Shinstock	28	St. Louis, Mo.	Cigar-maker	28 years	May 18, 1878.	Hepatic abscess		Pain, Aug. 18, 1878	Aspirated 3	Recovery	Sept. 16, 1878	Disch'd
XII. James Ryan	28	Ireland	Laborer	11 years	May 31, 1878	Hepatic abscess	Int. fever, dysentery, inj'y to liv'r	Pain, May, 1878	Aspirated 1	Death	Sept. 17, 1878	
XIII Joseph Ruffenach	53	Germany	Store-keeper	25 years	July 23, 1878	Hepatic abscess	Dysentery		Aspirated 1	Death	Sept. 9, 1878.	
XIV. William Strassburg	45	Germany	Liquor-dealer	20 years	Aug. 2, 1878.	Hepatic abscess	Gastritis, dysentery.	Sick, three weeks		Death	Aug. 9, 1878.	
XV. Philip Maguire	43	Wisconsin	Hide Inspector	8 mo's.	Aug. 15, 1878	Hepatic abscess	Dysentery			Death	Sept. 2, 1878	
XVI. Geo. Harris (col'd)	47	Virginia	Laborer	15 years	Sept. 5, 1878.	Hepatic abscess	Diarrhœa	Pain, Sept 14, 1878, Swelling, Sept. 14, 1878.		Death	Sept. 30, 1878	
XVII Owen Clark	28	Scotland	Laborer	4 years	Sept. 5, 1878.	Hepatic abscess	Chills, dysentery		Aspirated 2	Death	Oct. 8, 1878	
XVIII Charles Wright	30	New York	Laborer	2 years	Oct. 1, 7878	Hepatic abscess, multiple.	Dysentery	Pain, Oct. 20, 1878		Death	Dec. 18, 1878	
XIX. George Lehmann	35	Germany	Teamster	37 years	Dec. 12, 1878.	Hepatic abscess	Int. fever, dysentery.	Pain, Sept. 3, 1878		Death	Dec. 18, 1878.	
XX. August Ristan	30	Germany	Laborer	1½ years	Dec. 17, 1878.	Hepatic abscess	Diarrhœa	Pain, Oct. 20, 1878	Aspirated 1	Easier	Dec. 20, 1878.	

six, and cases two and eight are, perhaps, of doubtful diagnosis, but they are given as showing the complications which may occur, and the sources from which may arise in certain cases, uncertainty and doubt, as to their exact nature.

In most of the cases here recorded, we had a history of previous long-continued intestinal trouble, either diarrhœa or dysentery, the connection between which and the formation of abscess in the liver, by the absorption of septic material through the portal system, was so forcibly advanced by Budd, and which has been since very generally accepted as the pathogenesis of at least one form of hepatic abscess, what Murchison calls pyæmic abscess, in contradistinction to what he terms tropical abscess, viz.: that resulting more clearly from decided inflammation of the organ.

Further, in most of these above cases, after the intestinal trouble had persisted for an indefinite period, decided symptoms manifested themselves, which pointed distinctly to the liver as the organ involved. In most we had pain in the right hypochondrium, persistent and increasing in severity from day to day, and varying according to the decubitus of the patient. There was generally tenderness on pressure over some portion of the organ, and the patients invariably shrunk from percussion of the suspected region.

Physical examination then, in the greater number, established, without doubt, the presence of pus, and in one, the presumption was so great, as to induce us to advance the diagnosis with almost perfect confidence.

Not only were the local signs in these cases, as a rule, quite prominent, but the general or constitutional symptoms were pronounced, and indicated a profound disturbance of the whole economy. Thus there was more or less febrile reaction, with the recurrence of chills, or at least chilly sensations, followed by heat of skin and sweating—at the same time that there occurred progressive loss of appetite and wasting—but in none was there any notable psychical disturbance of the nature of hypochondriasis or otherwise.

Besides these cases I can recall to mind quite a number of others seen by me in the last three or four years in private practice, in which the diagnosis was readily made and was verified by the results either of treatment or *post mortem* examination.

I may mention among others a case in which there was a distinct tumor in the epigastrium, which from its very gradual appearance and the absence of pain suggested the possibility, if not probability, of hydatid, but which on puncture proved to be a true abscess of the left lobe of the organ—and not an hydatid cyst which had undergone suppuration—as on the most careful and repeated microscopic examination of the contents no hooklets or other evidences of entozoa were discovered. This case then presented certain difficulties as to its exact diagnosis, or rather differentiation, but at the same time there existed well-marked constitutional disturbance, such as persistent febrile reaction, and when I saw the patient he was confined to bed and already much reduced in strength and flesh, and after evacuation of the abscess, the emaciation continued and he succumbed to gradual exhaustion.

I recall yet another case, occurring in the practice of a brother practitioner, in which I was invited to express an opinion, and in which, though the constitutional disturbance was remarkably slight, there were very decided local signs pointing quite distinctly to the presence of pus in the liver, and in which repeated attacks of hepatic colic with consequent jaundice and the passage of gall-stones by stool, furnished a satisfactory cause for the subsequent inflammation and the formation of abscess.

There was visible bulging of the lower portion of the right thoracic wall, and percussion showed that there was extension of the line of dullness upwards and downwards in the same region, and fluctuation could be made out by palpation. The abscess was emptied by puncture with the trocar; the sack soon filled up, and was again emptied, after which the patient made a good recovery and remains well to-day.

There were never at any time hypochondriacal symptoms,

and the patient, with the exception of a short interval of rest and quiet, attended regularly to his business, even going down to his office immediately after the organ had been punctured.

The following case furnishes an example of tropical abscess, according to the classification adopted by Murchison, and presents a series of well-marked symptoms which point unmistakably to the nature of the trouble; and yet just such cases have been misunderstood and the presence of pus overlooked, not through any real obscurity, but as Copeland[1] says, "in consequence of the imperfect examination of the case;" precisely what happened in this instance, as was frankly confessed to me by the professional gentleman who had charge of the case before it fell into my hands.

Mr. B., aged 37, native of U. S., merchant, married, of very irregular habits and addicted to alcoholic excesses. Had been for some time, say a week or two previous to his illness, troubled with some gastric derangement, nausea and occasional vomiting, principally in the morning and just after rising. Complained some of pain in the back, lumbar region—bowels were irregular, but no diarrhœa.

Was taken sick on Saturday, 7th of September, 1878, with chilly sensations, followed by fever and soon some pain in epigastrium and right hypochondrium. I first saw him on the 17th, that is, ten days after the commencement of his illness, when I was informed that he had been attended by a regular physician, who had diagnosticated remittent fever, and had prescribed mainly quinine, which the patient was then taking; that his bowels had been constipated and difficult of movement; he had been troubled with restlessness and indisposition to sleep, for which anodynes had been given; further, that he had had more or less constant fever; had had nausea and some vomiting for the first day or two, since when the stomach had been quiet.

I found the patient to be a man of spare habit; he appeared quite anxious, agitated and restless, somewhat tremulous; he complained of nervousness, and attributed it to his inability to sleep. His decubitus was constantly dorsal with his legs drawn up, declaring his inability to

1. Dictionary of Pactical Medicine, Vol. II., p. 851.

lie on either side on account of ill-defined discomfort. On persuading him to change his position to the right side he complained of pain there, and soon resumed that on his back.

His tongue was covered with a very thick white fur, but moist; no nausea, no excessive thirst, bowels constipated, kidneys acting sufficiently well, sclerotic slightly jaundiced, skin dry, pulse 120, temperature 104 3-4° F., respiration 36. Inspection showed some fulness in right hypochondrium and much abdominal distension.

Percussion was tympanitic over abdomen generally. The line of hepatic dulness extended as high as nipple and about three fingers below border of ribs. Percussion produced much pain over dull region; slight pressure was scarcely bearable in epigastrium. Diagnosis then, was acute hepatitis, and I prescribed hot fomentations to region of liver and over abdomen, and to take internally a few grains of calomel, to be repeated in three and six hours consecutively, and a draught of chloral hyd., grs. 10, with morphia, gr. 1-8, at bed-time, to be repeated in two and four hours, if needed.

Sept. 18, 9 a. m.—Patient declared himself refreshed, having had a quiet night; attributed this to three doses of the anodyne. Calomel appeared to have produced some action on bowels; matters passed rather light in color. Temperature 101° F., pulse 120, skin and tongue about the same; abdomen tympanitic, whole hepatic region still painful to pressure and percussion. Ordered dil. muriatic acid, in fifteen-drop doses in sweetened water, which was very grateful to patient, and beef extract as nourishment.

9 P. M.—Temperature, 103°; other symptoms about same. From this date until 23d September there was a gradual decline in the temperature, so that the thermometer showed about 99° in the morning, and about 100° in the evening. The condition of the abdomen persisted, viz: the tympanitis and the hypochondriac tenderness, the tongue became clean and moist, and the skin lost its dryness. At the same time the patient showed a relish for food, and he was allowed a little chicken broth and gruel in addition to the beef tea, and quinine, in 3 gr. doses four times a day, was prescribed as a tonic.

He was quite cheerful, and declared himself stronger.

On Sept. 24th, the temperature and other symptoms remaining the same, he had several large stools, consisting entirely of black, tarry, or jelly-looking blood, and his pulse losing somewhat in volume, a moderate quantity of stimulant was allowed.

On the 25th the tongue again became dry, while the evening temperature showed some elevation, reaching again 102°. The pain over liver was more pronounced and circumscribed. Melæna continued. The diagnosis was now abscess of the liver, probably multiple.

These symptoms persisted, the patient became more and more exhausted, until the morning of the 29th, when death gradually and quietly put an end to the struggle. There was no intellectual disturbance, except during the last twenty-four hours, when there occurred a certain amount of quiet delirium.

Post-mortem, thirty hours after death, made by Professor H. Tuholske and myself.

On opening the abdomen (the cadaver having been since death on ice), the liver was seen to be very much enlarged in every direction, the left lobe extending into the left hypochondrium, and the lower border far below the margin of the ribs. The lower border of right lobe and gall bladder were adherent to the colon, and there was extensive deposit of recent lymph upon the surface of the organ. On attempting to remove the liver it was found to be firmly adherent to the diaphragm, and on using some force, these adhesions at the upper border of the right lobe gave way, the rent extending into the organ, and liberating the purulent contents of an enormous abscess, probably near two quarts. Besides this large collection, a great number of smaller abscesses, varying in size from a pea to a walnut, were found distributed over the surface, as well as in the substance of the organ.

The liver was generally of a dark coffee color, having here and there a somewhat mottled appearance; its consistence was at the same time altered, so that it was easily torn (friable). The small intestines were remarkably pale, while, in striking contrast, the large intestines were throughout their extent of a dark bluish tint, and contained a great quantity of dark grumous or jelly-like blood.

The first proposition, then, made by Dr. Hammond, "that abscess of the liver may exist without giving rise to any marked local or general symptoms, is a point with which those who have investigated the subject have long been familiar," cannot be accepted without question, because it claims it to be generally admitted by the best authorities, that collections of pus can remain indefinitely in so important an organ as the liver, without declaring its

presence by any symptom whatsoever. In other words, that it is an affection which *may* have, in certain cases, no symptomatology at all; and that an individual may, under such circumstances, remain, to all intents and purposes, in perfect health.

While we may admit the *possibility* of such an occurrence as a very rare exception, we hold, from our own experience and from the recorded experience of other clinical observers—taking the cases as they come, without selection—the rule to be that abscess of the liver is accompanied by *well* marked symptoms, either local or constitutional, and in the majority of cases by both. Speaking of the duration of one class of hepatic abscess (tropical), Murchison says: "Cases, too, have been known where a small tropical abscess, with organized walls, has existed for months, or even, perhaps, for years, in a quiescent form, and has then undergone enlargement and burst." To know this fact, there, must surely have been signs and symptoms to establish the existence of abscess during its quiescent state and before its enlargement and bursting.

The concurrence of any number or series of such cases of concealed or masked abscesses must be regarded as a most remarkable coincidence, and as contrary to the experience of all observers.

The quotations cited by Dr. Hammond, do not, by any means, support the above proposition laid down by him, but only go to prove the obscurity of the diagnosis in certain cases, by reason of the complications which may take place, of the association with a variety of other affections which may occur, thus rendering the symptoms equivocal and difficult of correct interpretation. That hepatic abscesses have been found in the cadaver when none have been suspected during life we are not disposed to deny; but we have no doubt that in the vast majority of such cases, the lack of suspicion has been due to the carelessness or inexperience of the observer.

Even the cases recorded by Dr. Hammond, do not bear him out in the views he has taken. For example, in Case I.

we have the history of a violent blow in the region of the liver (right side), which is admitted to be a sufficient cause for hepatic abscess. Though there was never any decided pain in the part, and no enlargement, there was gastric derangement, some pain at times in the right shoulder, and very marked hypochondria. Strong pressure over the region of the liver caused slight uneasiness, but no sharp pain. By palpation "I (he) thought I (he) detected fluctuation." There was no fever and no exhaustion, except that fairly attributable to the spinal disease.

The above group of symptoms surely constituted strong presumptive evidence of the presence of pus, and justified, in our opinion, an exploratory puncture. The second and third were cases, respectively, of cerebral hemorrhage and cerebral hyperæmia, in both of which the Doctor thought he detected fluctuation. In both, aspiration proved the correctness of his touch. In the fourth case, one of cerebral hyperæmia, with great derangement of the stomach, jaundice and decided hypochondria, there was distinct fluctuation.

While not disposed to deny the *possibility* that small and circumscribed abscesses of the liver may exist for a length of time—months, or even years—without producing any disturbance of the health of the individual, we have yet to learn by what process of reasoning such a fact can be definitely determined. We are slow, however, to believe that any considerable collection of pus can take place within the substance of so important an organ, without being accompanied by more or less decided constitutional or local symptoms. The physician may fail, it is true, in a confident diagnosis in a certain proportion of such cases, not because of the paucity of symptoms, but because of the misinterpretation of such as do occur, and it is our conviction that few patients ought to die without a suspicion of such a condition of the liver. My friend, Dr. Geo. J. Engelmann, in conversation recently on this subject, related to me the history and symptomatology of a case terminating fatally, in which he discovered, on *post mortem* examination, performed

by him, at the request of the attending physician, multiple abscesses, five or six in all; one quite large occupying the superior and posterior portion of the right lobe of the liver, the others ranging in size from that of a pigeon's egg to an orange—and in which case there had been entertained no suspicion of such complication by reason of the absence of local signs. The liver was neither enlarged nor tender. The patient had been treated for persistent fever of an intermittent type (supposed to be malarial), which resisted medication, and sometime previous to death there occurred dysentery and much gastric disturbance.

Now I hold that in just such cases as this the very persistence of the intermittent fever and its intractability ought to create the suspicion that it is not due to malarial origin, but rather to some organic lesion, which, experience teaches us, may occur in various organs, and be accompanied, for some time before the development of local signs, by febrile excitement as the only indication of disease. With this suspicion of organic disease, excited by the character and persistence of the fever, and with the assistance of other symptoms, as of disturbed nutrition, gastric and intestinal derangements, which must almost inevitably in time occur, we will seldom fail, by careful study and analysis of the symptoms and by the process of exclusion, in arriving at a correct conclusion, or at least a very strong presumption, in regard to the real seat and nature of the lesion.

But Dr. Hammond lays great stress upon the psychical phenomena, "Hypochondria," as a diagnostic point in the recognition, and lays down the proposition "that in all cases of hypochondria or melancholia the region of the liver should be carefully explored, and that, even if no fluctuation be detected, or any other sign of abscess be discovered, aspiration, being a harmless operation, should be performed."

Now since, as says Fothergill, in the quotation cited by Dr. Hammond to support this proposition, "We are familiar with emotional disturbance or melancholia in other abdominal affections than the liver *merely;* it co-exists with fœcal accumulations in the colon, with Addison's disease,

with uterine displacements, and with peripheral irritation in the reproductive system," how can hypochondria be regarded but as a very equivocal indication even of functional derangement of the liver, and as shown by extensive *post-mortem* examination to have no fixed connection with any form of structural lesion.

Dr. Walter Coles, in a very able article on "Hepatic Abscess," in the October number of the St. Louis *Medical and Surgical Journal*, quotes Esquinol to show that but two instances of diseased liver were found in 168 melancholics, while in the same number there were sixty-five morbid changes in the lungs; that further, in sixty autopsies of cases of dementia there were only two in which the liver showed evidences of disease.

Again, in 259 *post-mortems* of insane persons, displaying morbid changes of structure in various organs, other than the brain, Scipion Pinel found lesion of the liver in only five. I may add to this that in ninety *post-mortems* of melancholics made by Dr. Theodore Deeke, Special Pathologist of the N. Y. State Lunatic Asylum, in six years, not *one* case of abscess of the liver occurred.[1]

As regards the treatment of hepatic abscess, there is probably a general agreement as to the advisability of an early evacuation of the pus, and very few are likely to adhere to the views of Dr. Budd, as set forth in his work on "Diseases of the Liver," that considering the dangers of operating so many, and so great, it is better to let matters alone and allow the abscess to open of itself."[2] Doubtless in this respect great advance has been made, but the question is yet undecided as to the best mode of evacuating the pus.

No one at all familiar with the aspirator, can doubt its great advantage as an aid to diagnosis, in cases which must otherwise remain obscure, until they have passed beyond the reach of remedial agents, nor refuse to assign to it its proper place as an adjuvant in the treatment; but experience has yet to show that this instrument is alone suffi-

1. Autograph letter.
2. 3d ed., page 124

cient for the cure of any considerable collection of pus in any organ of the body. We have a strong predilection for the aspirator, and are inclined to consider it as the first step in the management of abscess of the liver, but our experience goes to show that its usefulness and efficiency is limited, and that the first evacuation of the pus by the aspirator must be followed by a freer opening, which must be maintained either by a drainage-tube or other means. We have found it to be a uniform rule that the cavity has rapidly refilled, and that by a disturbance of its condition the character of the pus has been altered, become less free from odor and changed in consistency. [1] Dr. Stephen H. Ward, a very high authority on hepatic abscess, who has had large experience in the Seamen's and Dreadnaught Hospitals, London, says: "I have generally opened abscesses of the liver as I would an ordinary abscess, with a lancet or bistoury. I have inserted a plug of lint to prevent closure of opening so long as abscess was discharging. I have never known a discharge of fetid pus to be unattended with constitutional disturbance. I have only once used the aspirator, and do not intend to recommend it again in hepatic abscess. In the case in which I used it there was a rapid reformation of (?) fetid pus, with severe constitutional symptoms and a fatal termination." Another feature which militates strongly against the curability of hepatic abscesses by simple puncture, is the fact of their multiplicity in the same case, for it is to be presumed that the futility of the proceeding is readily apparent when a number of abscesses exist, and hence an essential condition of successful treatment is that the abscess shall be solitary.

Here again must have been a fortunate coincidence in the cases reported by Dr. Hammond.

Our *post mortem* examinations at the City Hospital show multiple abscesses in most cases, and Dr. Geo. J. Engelmann, of this city, who has made a large number of autopsies, tells me he does not remember to have seen a single instance of solitary abscess.

1. Autograph letter.

It is probable then that most of the cases we meet with in this region, like those in England, are of the pyæmic variety. As Murchison[1] says, "the abscesses of the liver which are met with in this country (England), and which are the result of purulent absorption, are usually, if not always, small but numerous. On the other hand, when abscess of the liver is met with in the tropics, there is but one abscess which attains to large dimensions, or in exceptional cases there may be two or three." The abscesses recorded by Dr. Hammond must have been of this last variety, unless, as he claims, of an entirely new species, and as the result of disease of the brain.

Dr. Charles E. Michel, of this city, has made to me an excellent suggestion as to the mode of securing adhesion of the peritoneal surfaces preparatory to evacuation of the abscess, viz: to puncture the wall of the abdomen sufficiently to penetrate the peritoneal covering of the liver by means of a number of small needles, the heads of which, say a dozen or more, have been firmly secured in a plate of lead. This can be readily done by sticking the needle points upwards in a cup containing sand, and puring on them moulten lead to a sufficient depth. Having first determined the presence of pus by aspiration, adhesion can be readily and safely secured by this little operation, when we may safely proceed to open the abscess by the bistory, and establish a free outlet and thorough drainage, washing out the cavity from time to time with antiseptic fluids.

Epilepsy of long standing may be cured by employing a solution of curare, seven grains to seventy-five minims of water, to which is added two drops of hydrochloric acid. At intervals of about a week, eight drops of this solution are injected hypodermically. Cases of several years standing have been cured after eight or ten injections.—*Press and Circular.*

1. Diseases of liver, page 165.

CASES FROM PRACTICE.

AN ENORMOUS TUMOR.—HERNIAL.

By Prof. J. T. Hodgen, M. D., St. Louis.

Mrs. McC., aged 40, married, the mother of two children, respectively of 16 and 14 years, died September 8th, 1878. Mrs. McC., first called the attention of her family physician, Dr. Illinski, to a tumor of the left labium, in September, 1873.

In May, 1874, the tumor was examined by Dr. Jennings and myself, though not in consultation.

The tumor was soft, about the size of a goose egg, and occupied the left labium. It was found that it could be readily reduced and pushed beyond the reach of the fingers in the vagina while the patient was in the recumbent position, but immediately returned on assuming the erect position and had a decided impulse on coughing. It was then thought to be a hernia of very unusual form coming down through the pelvic outlet, and while down, formed a well-marked tumor externally, and gave a marked fullness to the left side of the vagina as far as the fingers could reach. She was directed to wear a suspensory, and as much as possible remain in the recumbent position. About this time she began, at the periods of menstruation, to complain of difficulty in voiding urine, and a painful fullness of the tumor, which was apparently larger at those periods, and now Dr. Jennings observed that on introducing the catheter, it, instead of passing in the usual direction into the bladder, turned downward and to the left, in the direction of the tumor.

The tumor continued to grow, and the distress, from a sense of inability to empty the bladder and the painful fullness of the tumor during the monthly periods, increased. I say, sense of inability to empty the bladder, for the reason that when a catheter was passed, but little urine was found. There was never a time when she could not pass urine if there was any considerable quantity in the bladder, and it seemed to pass with the usual force, and was always under control, notwithstanding the bladder was entirely outside of the pelvic cavity.

In May, 1878, the following observations were made by Drs. Jennings, Fairbrother, Mudd and myself: Percussion elicited only a flat sound. Dr. Jennings from time to time tried percussion but never found it resonant. A gum catheter could be passed through the urethra and down into the tumor nine inches and the catheter could be distinctly felt through the walls of the tumor. The perpendicular length of the tumor was twenty-one inches, its greatest circumference fifty-three inches, circumference of its neck twenty-one inches, weight ninety-four pounds. The uterus was found with its body turned to the left and lying almost horizontally in the pelvis, distinctly above the pelvic outlet. The vagina was elongated on its right side. The entire left labium had disappeared into the surface of the tumor, making the fissure of the vulva perhaps five inches in length; the left side of the anus was also drawn down upon the side of the tumor, the opening being very oblique.

On the 4th, of June, 1878, the photographs, from which the cuts are made, were taken; this was during the interval of menstruation and while the tumor was less, and the patient not suffering except from the weight of the tumor.

June 6th.—The vertical length of the tumor was seventeen inches, greatest circumference forty-three inches, circumference of neck twenty-one inches, weight sixty-four pounds.

In the absence of the menstrual period the surface of the skin was nodulated, not tense, cool, of a darker color than other portions of the body, and scattering hairs projected from deep pits on the anterior part of the tumor. A distinct area of fluctuation could be observed on the middle portion over a surface of ten or twelve inches in diameter, the remainder of the tumor was soft and

Fig. 1—Anterior View.

when agitated moved with a jelly-like tremor. These observations were made with the tumor resting on a lounge. The size and general form reminded one of the first stomach of an ox, partially filled with some solid material.

The patient during the past two years has had a stool upon which she rested the tumor when using the vessel, when dressing or standing. When she desired to walk, which she did at times, except during the monthly period, the tumor was supported in a sack, suspended from the shoulders. In standing, the tumor dragged down to the ankles.

The general health had been good, the flesh was kept up, she was cheerful and happy, a great favorite with her acquaintances from whom she received many expressions of sympathy.

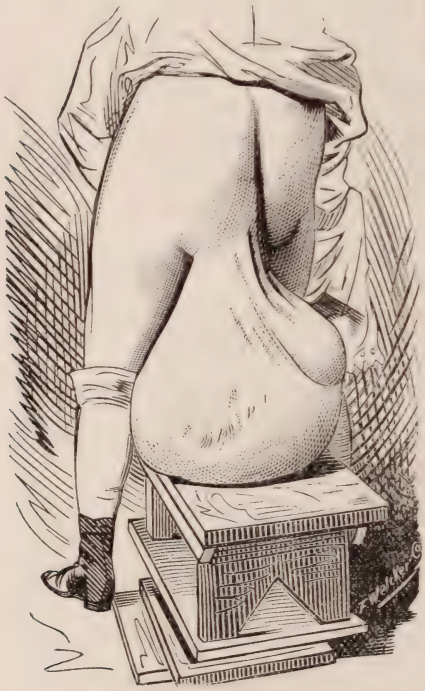

Fig. 2.—Posterior View.

About the 25th of July she had an attack of intermittent fever, from which she recovered promptly, under the care of Dr. Jennings, her family physician. "September 5th, was seized with a chill of unusual severity, reaction not being fully established in less than four hours, notwithstanding the vigorous use of those measures deemed most effectual in such cases. After reaction came on, the temperature reached 104° F., and continued until the following morning, when the temperature fell to nearly the normal standard, and a corresponding abatement of all the febrile symptoms took place. Quinine was then given in full doses, but during the night the temperature began to rise and soon reached 105° F., delirium set in, and several livid spots appeared upon the surface of the tumor. These spots evinced a tendency to spread with considerable rapidity.

The following morning a consultation with Drs. Hodgen and Mudd was held, resulting in a determination to continue the quinine and await developments.

No improvement took place and the patient died at one o'clock A. M., September 8th."[1]

Dr. Illinski states that when he "first saw the case, the tumor corresponded in size and shape to half a hen's egg, occupying the inferior portion of the pudendal region of the left side." His diagnosis was hernia.

Died September 8th, *post-mortem* ten hours after death, in presence of Drs. Jennings, Fairbrother, Sisson, Mudd and Mr. Black—Mr. B. making the sketch from which the third wood cut is taken. An incision was made through the abdominal wall from the enciform cartilage to the pubis. The stomach was entirely to the right of the median line the left end being opposite the umbilicus, the colon ascended obliquely from the right iliac fossa to left side of the abdomen; on drawing the *colon* upward from the pelvis the omentum followed it, and, the hand being passed through the pelvis into the tumor found a part of the omentum still within the sack; a part of the colon also had probably been in the sack.

The uterus and both ovaries were found in the pelvis, the uterus lying across the cavity with the fundus to the left. The urethra turned immediately downward and opened into the bladder, which formed a part of the tumor, not a part of the contents of the hernial sack, but a part of its wall. The hernial sack contained about a gallon of serum. The neck of the sack admitted the hand, and the sack itself, as the tumor lay

Fig. 3.—Showing Relation of the Opening.

1. Dr. Jennings' statement.

flattened on the table, was ten or twelve inches in diameter. The skin was enormously hypertrophied, while its deeper layer was directly continuous with the hypertrophied connective tissue, and these, the hypertrophied skin and connective tissue rendered œdematous by serous infiltration, formed nine-tenths of the mass, which, as a whole, weighed sixty-nine pounds after removal, nearly thirty pounds less than it had weighed when congested and more tensely filled with serum, four months before. Half a dozen large blood vessels, some as large as the little finger, passed from the iliac vessels into the tumor.

Remarks.—In the earlier stage of development, this tumor was satisfactorily determined to be a hernia, as indicated in the history above given. At a later period, May, 1878, this diagnosis was shaken by the thickened feel of the tissues composing it, by the bladder forming a part of it, by the displacement of the uterus towards it, by the wave-like undulations of the tumor when tapped by the fingers, the size and form of the abdomen, which indicated the presence of the usual vicera, and by the absence of resonance on percussing the tumor. Then I was led to suspect that the tumor might contain an ovarian cyst.

The case is peculiarly interesting from the enormous size of the tumor, as a whole, contrasted with the very small (comparatively) amount of hernial contents.

The history of its formation would seem to be that the hernia having occurred, escaping through the pelvic outlet, pressed on the veins returning the blood from the labium and perinæum, and that this congestion favored the nutrition of these parts of the tumor. A hyper-nutrition of the normal tissues, due to the presence of an excessive amount of the pabulum on which these tissues feed. The hernia consisted of omentum alone in the beginning, which omentum became, as it ordinarily does under such circumstances, hypertrophied, and this was then the principle agent in retarding the blood-flow from the parts supplied by the internal iliac artery of the left side, so that finally the skin, connective tissue, blood vessels and nerves became enormously hypertrophied. The tardy return of venous blood caused a tardy flow through vessels of the pendant parts; this resulted in dilatation of said vessels, and in the more free exosmosis of the nutritive elements of the blood into the intertissue spaces.

Another point of interest was the ability possessed by the

patient to evacuate the bladder at will, notwithstanding that organ was removed beyond the influence of pressure from the abdominal muscles.

The helpless condition of such a patient would tempt the surgeon to undertake the removal of the tumor, the yielding to which would indicate a disproportion between boldness and discretion, the former predominating. The result after such an operation could not have been a permanent cure, since, had the mass of solid contents been removed and the hernia with sack returned to the abdomen, there would be no possibility of closing the opening through the pelvis, through which the hernia had escaped, and the tumor would have again formed as the finale of the most successful operative proceedure.

A CASE OF IVETERATE EPILEPSY, SUCCESSFULLY TREATED BY ERGOT AND BROMIDE OF SODIUM.

By J. K. Bauduy, M. D., *Professor of Nervous Diseases and Psychological Medicine in the Missouri Medical College.*

In the treatment of such an implacable affection as epilepsy, specialists in the treatment of nervous diseases have few successes to signal in confirmed cases.

Therapeutic measures are ordinarily crowned with good results only under special circumstances, peculiarly favorable for their attainment.

When the malady originates in eccentric causes which can be removed, reflex irritations, which, whilst recognizable are susceptible of eradication, together with epileptic manifestations which are acute or strictly incipient in character, and certain dyscrasia from blood poisoning; all these conditions constitute the sole varieties of this morbid affection which furnish a reasonable hope of cure. Idiopathic cases are usually irremediable; such at least is the usual experience of the profession at large. The following case, therefore, is of no little interest, and its peculiarities will afford an ample apology for its publication.

Miss ——, *æt* 18, consulted me in 1874. Her mother gave the *history* of her case, which I will state as concisely as possible.

She had been subject to attacks of epileptic convulsions from

the age of 2 *years*. The attacks were of the nature of *grand-mal*, and occurred monthly. They thus continued until about the period of puberty, when they became greatly aggravated in frequency and intensity. The etiology was very obscure, if not altogether wanting. There was a vague reference to an accident sustained in early childhood or infancy, occasioned by the nurse falling with all her weight upon her, causing her to expe rience a severe blow upon the back of her head. Beyond the statement of the mere fall that was sustained, it was impossible to recall the subsequent development of symptoms which were directly or indirectly to be traced to such an injury. As stated before, when the catamenia were established, all the manifestations of the epileptic disease were intensified, on which occasions the periodical hemorrhage was ushered in with a violent convulsion. Five or six lighter attacks invariably followed during the course of the first day. On the second day two or three more seizures occurred. On the third day she usually escaped with one.

In order to convince the most skeptical, I may state *en-passant* that a most careful analysis of all the symptomatic developments most obviously corroborated the diagnosis of epilepsy. The profound loss of consciousness, the laceration of the tongue, the tonic followed by clonic convulsions, the great pallor of countenance at the commencement of the seizure succeeded by great lividity, the foaming at the mouth, the stupor or comatose condition which followed the convulsions, were all susceptible when viewed in one picture of but one possible interpretation.

The case could not properly be relegated to the nosology of hystero-epilepsy, because the characteristic *contortions* which are almost pathognomic of that disease were entirely absent.

The most interesting collateral fact connected with the case, was the frequent development of a singular and anomalous state of mental automatism.

Dr. Hughling S. Jackson has offered to the literature of this subject, some most interesting observations, the explanation of which has many features of the originality for which that distinguished observer is so justly celebrated. He states that "the condition after the paroxysm is duplex: (1) there is loss or defect of consciousness, and there is (2) mental automatism. In other words, there is (1) loss of control, *permitting* (2) increased automatic action."

Dr. Hammond in commenting upon these views in the recent edition of his most excellent work on Diseases of the Nervous System, states that "whilst in the main agreeing with Dr. Jackson, I am scarcely prepared to deny that such unconscious attacks may not be substituted for the more fully-developed paroxysms instead of, as in his opinion, always following a seizure."

My experience, however, epecially that which is illustrated by the remarkable case we are citing, concurs with Dr. Jackson's views, that such phenomena are post-epileptic, and not mere substitutions for the seizure proper. This young lady, who was an accomplished musician, would perform most difficult pieces upon the piano, and when subsequently complimented by visitors, who were then present, would not have the most remote recollection of ever having played in their presence. She would, under these influences knit marvelously and achieve prodigies of fancy work with her needle, and upon being interrogated by her mother would be entirely oblivious of such accomplishments during the prevalence of the automatic mental conditions described. Being a Catholic, she frequently went to confession and communion whilst subjected to these peculiar mental phases, and upon returning to her normal mental state, would most strenuously deny to her relatives any recollection of such actions, usually disavowing the possibility of their occurrence, without her full consciousness and remembrance thereof. Her general deportment, intelligence and coherence of conversation during the mental automatism were all that her most critical friends could desire; yet the oblivion of all actions, conversations and moods, whilst thus acting automatically, was necessarily perfect and incontestable. Such were the developments which for years marked this young lady's life, and no one will consider them exaggerated who is at all familiar with the literature of the obscure, remarkable and protean manifestations of epileptic disease.

A case cited by Dr. Hammond, page 672, in his sixth edition, "Diseases of the Nervous System," occuring under his observation, and in which the mental automatism lasted eight days, will satisfy the doubts of the most incredulous upon this subject, as it is the most remarkable case on record and an undisputed fact. That Dr. Hammond is *facile princeps* the leading authority on this continent on all that is allied to Neurological Science, will be my apology for introducing it in this connection.

The patient, who was engaged in active business as a manufacturer, left his office at about 9 a. m., saying he was going to a florist's to purchase some bulbs. He remained absent eight days. He was tracked all over the city, but the detectives and friends were always an hour or more behind him. It was ascertained that he had been to theatres, to hotels where he slept, to shops where he had made purchases, and that he had made a journey of a hundred miles from New York, and, losing his ticket and not being able to give a satisfactory account of himself, was put off the train at a way-station. He had then returned to New York, passed the night at a hotel, and, on the eighth day, at about ten o'clock, made his appearance at his office.

He had no recollection of any one event which had taken place after leaving his place of business, eight days previously, till he awoke on the morning after his return to the city, and found himself in a hotel at which he was a stranger. It was ascertained beyond question that in all this time his actions had been entirely correct to all appearance, that his speech was coherent, and that he had acted entirely in all respects as any man in the full possession of his mental faculties would have acted. He had drank nothing but a glass of ale, which he took with some oysters at a restaurant.

I will not be accused of a digression in the clinical description of this case by the aforesaid references, as this history would not be complete without their citation. Then again, for those who (as regards its therapeutic management which is to follow) are incredulous concerning the *post hoc ergo propter hoc*, will at least be convinced that all the phenomena which had to be dealt with were purely of epileptic origin.

The patient had been treated most perseveringly by many eminent physicians, and was finally taken abroad in order that nothing would be left undone. She was there under distinguished professional care. In passing through this city, in October, 1874, her mother was induced to consult me by a mutual friend.

I must confess that I felt that, under the circumstances, it was almost useless to prescribe.

As a forlorn effort at simple palliation, I determined to utilize the recommendations of Dr. Kitchen, in a then recent article in the *American Journal of Insanity*. The article referred to is

headed as follows: "Ergot in the Treatment of Nervous Diseases," by Dan. H. Kitchen, M. D., Assistant Physician of the New York State Lunatic Asylum. He states, page 90, July Number, 1873:

"In epileptic headaches and in epilepsy we have used ergot largely."

"In *petit mal* there are muscular twitchings, congestions of the face, suffusion of the eyes, and a rush of blood to the head. We have in many of these cases been able to ward off the *grand-mal* by large doses of ergotine. We have often combined it with conium, and it seems in this combination to work even more satisfactorily than alone, which is chiefly due, we suppose, to the sedative effect of the conium."

We therefore placed the patient upon a formula almost identical with Dr. Brown-Sequard's celebrated one for epilepsy, substituting the sodium for the potassium salt, in consequence of its less depressing effect and of its greater tolerance by the system, giving three times daily twenty grains of the former with a half drachm of Squibb's Fl. Ext. Ergot. She began the remedy in October, 1874, and took it *faithfully* for a year and one-half.

Her mother stated that at the four subsequent menstrual periods she had three severe epileptic seizures daily. They then disappeared entirely. Continued medicine, notwithstanding their cessation, for over eighteen months. The fits have never recurred since early in February, 1875, now three years and ten months.

Present condition—Her general health is excellent; she enjoys society, of which she is an ornament; her intelligence is far above the average; no vertigo; no nervous symptoms of any kind are present; no phenomena which might point to the presence of aborted epileptic paroxysms. One month ago she was in my office in splendid mental and physical condition, presenting no traces of her old malady except numerous scars upon her tongue, vestiges of her direful experience in the past.

ABSCESS OF THE LIVER, WITH RECOVERY.

By A. Ostertag, M. D., Carondelet, Mo.

As the subject of hepatic abscess has, of late, been attracting the attention of the profession, the following case, as a clinical contribution, is thought sufficiently interesting for report. Its history however, is not as complete as could be wished.

October 10th, 1877, about 10 o'clock, A. M., I was called to see B. D., a German, æt. 32, whose disease had for several months, even in diagnosis, defied the skill of his attending physicians.

History.—Is from a pefectly healthy family, had never known what it meant to be sick until two years previously, when, being engaged as a carpenter, in one of our zinc works, he, on a very hot day, in July, 1875, in common with another workman, was employed in mending the roof of the factory. The ascending gas of the burning ore, sulphur, etc., was so oppressive and stifling that the confrère soon desisted, but he (patient) being of stronger nerves, finished the work, which lasted several hours. After this, and for the first time in his life, he felt his strength broken; three weeks later he had chills, from which he has continued to suffer, more or less, though taking remedies as advised by several different physicians. It was suggested by his fellow workmen that he had the "gas fever" (saturnine poisoning), and should take milk, a popular remedy among them. This he did, freely, and with apparent benefit; though never regaining his former strength.

For the past three weeks had been suffering from fever, varying in degree, also from constant dull pains in the right hypochondrium, on acconnt of which he had become quite irritable in temper and broken in health. His physicians, in the belief that this was the result of congestion of the liver, had him cupped freely, with the assurance that the disorder was of no moment, and would soon pass off.

Treatment.—As he was suffering from pain in the hypogastrium, with inability to micturate, I gave a half drachm dose of quinia, and a saline diuretic. This gave marked relief. On the following day, suspecting structural alteration in the liver, I

took increased interest in the case, and determined to watch it closely. Advised large doses of quinia, in combination with the iodides and taraxacum.

October 13th, I was called in the evening and found him in a dangerous condition, with high fever, pain in the right hypochondrium increased and hæmatemesis occurring. As the purgatives, given in the morning, had not operated, he was relieved by enemata. Next morning, I learned that he had during the night, and for the first time, heavy rigors, followed by profuse perspiration, which left him much depressed. This convinced me, that, what I had suspected from the beginning, could not fail to be true, viz: abscess of the liver. I therefore prepared his own and the minds of his friends for the conviction, that the only hope would lie in an operation with the aspirator. To such a step I could not at once get agreement. So, keeping him in as good condition as possible by medicines and the best nourishment, I waited another day. Drachm doses of quinia kept up his strength, but did not prevent, on the following night, still worse rigors, with increased prostration, making the continuance of his life very doubtful.

This made clear to the patient and his friends, the great danger; so they consented to my proposals, and gave me full power to act according to my own judgment. October 15th, calling in the assistance of my friend, Dr. A. J. Steele, about 4 P. M., after a short consultation, I drew off, with a number 2 needle of a Dieulafoy's aspirator, inserting it at the lower margin of the cartilage of the eighth rib, right side, 70 C. C., (3 oz.) of a thick, greenish, yellow-looking pus, of an offensive odor; this at once relieved him. As the aspirator was not constructed on the air-pump principle, no more pus could be drawn off, and this at once gave me the impression, that whatever might be the size and direction of the abscess, for a perfect cure, the operation would have to be repeated; this proved so afterwards. For a few days patient did nicely, he being kept in good condition by strong wines and nourishment. But soon his stomach refused to retain anything; so at the suggestion of Dr. Steele, nourishing enemata of Valentine's meat juice, eggs and milk, were given for nearly a week, nothing being taken *per os,* except strong wines and water; this proved highly serviceable. After a few days, rigors having set in again, I drew off (one inch lower than before), 100 C. C., (4 oz.), of pus, of the same quality as at the previous

operation, with the same temporary relief. By proper treatment and excellent nourishment, life was prolonged beyond all our expectations, and hope was entertained that the case might soon come to a favorable end.

After the second aspiration, pus flowed through the first opening, partly by pressure, partly by itself, being favored by warm poultices. Soon the stools became, for some days, very loose, largely charged with pus. The patient expressed himself as feeling a communication between the liver and bowels, and could by pressure over the liver, produce peculiar pus-containing stools.

Towards the end of the month, a very troublesome cough, with profuse night sweats, and piercing pain in the right shoulder set in, which reduced his strength very much. This cough for some days brought up puriform sputa, having the same offensive odor as the matter drawn by the aspirator. Physical examination over the right hypochondrium had never, during the whole sickness, shown much increased area of liver-dullness downwards below the ribs, but dullness upwards, over right half of chest was very marked, beginning slightly at the third rib, and becoming perfect from the fourth rib downwards.

Reading from my case book, I find:

November 6th, both aspirator needle-openings closed for the first time; nights somewhat restless; urine clear since yesterday; appetite perfectly good; stools retarded.

November 7th, last night was the best during the whole sickness; two light stools; wound secreting a very little; state of health excellent; pulse 72.

November 8th, great improvement.

November 9th, friendly call with Dr. Steele; explorative puncture with hypodermic needle, between sixth and seventh ribs; no pus, only a little blood.

November 10th, fistula ordered to be cauterised with Tinct. of Iodine twice a day.

November 15th, profuse perspirations, fistula again discharging. Towards the end of the month the cough, emaciation, night sweats, and pain in right chest and shoulder growiug extremely troublesome, and the sputa having again the same appearance and offensive odor as before, I suspected tuberculous affection of the lungs and pleura; but a consultation and examination with Dr. G. Baumgarten gave no conclusive results. From this

time on, disinfecting injections of carbolic acid and chloral were used, but as the canal was extremely narrow and enlargement by the knife thought too dangerous, but little could be accomplished by them.

December 8th, bulging out of the lower half of chest wall was marked, patient manifesting uneasiness; as medicines could do no more for him, my only hope was to give the pus another outlet by incision into the pleura; this, after another consultation and very close examination under chloroform by Drs. Steele and Glasgow, was not thought advisable. The chest was blistered, but without special relief. For the increasing anæmia, cod-liver oil and malt extract were prescribed, but had soon to be left off, as his stomach was quite intolerant of the mixture.

December 16th, great exacerbation, temperature 103° Far., dyspnœa, pain in the right shoulder and prostration extreme, stomach perfectly rebellious. One-third grain doses of morphia, given several times a day hypodermically, and one-half drachm doses of quinia, twice a day, in an enema, gave again some hope. This treatment was continued to December 20th, his stomach having again regained its strength. He was chiefly troubled by profuse night sweats, which were relieved by quinia, zinc oxide, belladonna internally, and disinfecting injections continued. At the close of the year, the patient had a good appetite and was out of doors during the warm hours of the day.

January 12th, 1878, I find the remark: Supposed perfect convalescence, as all functions seem in perfect order, fistula closing up. Temperature, measured in the mouth, normal. Though learning occasionally that he was doing well, I still had fears. As he was tired of medicines, I, with hopes of improving his anæmia, advised (according to Professor Mosler, in Ziemssen's Cyclopedia), the drinking of warm blood, in a butcher shop; to this he at once consented, and tried it for five or six weeks with evident benefit.

February 19th, I was again called, as he had for some time complained of increasing dyspeptic troubles. At the hepatic flexure of the colon there was an obstruction to the passage of the feces. For this, Carlsbad salts were used.

February 27th, the wound was discharging pus again, which gave him great relief. From this time on to April remained about the same; fistula discharging meanwhile. Constant cough with offensive sputa, night sweats and shoulder pain worried and

prostrated him. Operation by the knife was now thought indispensable, and so April 3d, making again a close examination under chloroform, in the presence of Dr. Baumgarten, I enlarged the very constricted cicatricial opening, about one inch deep. To our surprise a large quantity of offensive pus was discharged, which continued for several days.

Drainage tubes were now tried, with the intention of giving the pus a free outlet, and keeping the abscess clean by frequently repeated injections, but this proved soon an impossibility, as the extreme sensitiveness of the wound allowed only the introduction of a No. 4 elastic catheter, and even this had to be done with the greatest gentleness.

It was clear to my mind, that the only obstacle to the healing of the fistula (which was now nine inches deep and reached nearly straight through to the neighborhood of the spine), was its filling up by pus, and my hope was in a perfectly-working air-pump to keep it empty. After fruitless trials with several expensive instruments, I at last found what was necessary in an old-fashioned clyster-syringe, which, being used for several days, permitted the fistula to heal entirely.

June 15th, 1878, I learned that the patient had been at a friend's party, dancing all night and enjoying his full health.

So ended a case, that was, during its course of more than six months, several times dispaired of by the best professional men, who happened to observe it. Examining into the etiology of the case, I am unable to find the least cause for the trouble, except malarial poisoning.

His habits of life, although not strictly abstemious, had never been intemperate, and as to drinks, he always preferred wine, so alcoholism was not a cause, nor did he ever suffer from dysentery or phlebitis.

The quantity of pus discharged can only be estimated approximately, and cannot, in my opinion, give an exact idea of the size of the abscess (multiple?); in my estimation it was certainly not below six pints.

Jaundice was never marked; but the pain in the right shoulder (Niemeyer) was at times very severe, so that it formed part of his worst sufferings.

Whether the purulent stools and sputa show conclusively that there were communications between the liver and colon, on the one side, and between the liver and bronchi, on the other, I am unable to state, but feel inclined to believe so.

The paroxysms of heavy rigors and slighter exacerbations, show the character of the septo-pyæmic poison in its effects on the system in a very clear light; the intervals of apparently perfect health with excellent appetite, and even normal temperature, in spite of (large ?) quantities of pus remaining in the body, may be explained on the theory which Professor Billroth is vindicating, namely: That as long as the walls of a granulating surface are unbroken, no resorption of septic poison takes place, but as soon as the granulations are destroyed, the poison is taken up by the lymphatics and superficial blood-vessels and carried into the circulation, exciting "Septo-pyæmic Fever."

At this date, November 15th, 1878, the patient is well; what his further history will be, the future must decide.

DISLOCATION OF RADIUS AND ULNA INWARD AT ELBOW (INCOMPLETE).

St. John's Hospital—Service of T. F. Prewitt, M. D., *Professor of Clinical Surgery, Missouri Medical College.*

Katie Powers, aged 5 years, presented herself at the surgical clinic, August 25, with the following history: On the 19th of July last she was swinging upon a trapeze, holding the crossbar with her hands, when a large boy gave her a push, swinging her up several feet; losing her hold, she fell upon her right elbow. The pain was very great, and the elbow was flexed and immovable. In a few hours it was greatly swollen, hot and painful, so that when seen by a physician, the nature of the injury could not be determined. Ice was applied, and the swelling subsided in a few days. It was then supposed that a fracture had occurred about the elbow-joint.

Present condition, five weeks after accident.—Careful examination of the elbow in detail reveals no evidence of fracture. The forearm is flexed and cannot be extended much beyond a right angle without causing pain. It is held ordinarily in a position midway between pronation and supination, but both these, *i. e.*, pronation and supination, are perfect. The axis of the humerus continued, strikes the middle of the palm of the hand

of the injured side, while upon the sound side it strikes the inner margin of the palm. The external condyle is prominent, while the inner, ordinarily most so, does not project beyond the inner margin of the olecranon process, which in turn is found grasping the internal condyle (epicondyle), while the finger running along the inner side of the ulna to the olecranon finds the condyle immediately in contact with its upper surface, instead of half an inch above it (the forearm being flexed). The head of the radius no longer occupies its normal position, but can be felt rotating below the olecranon fossa (into which the finger can be pressed), moving upon the trochlear surface, though in a line with the ulna.

These points establish the diagnosis. Over the external condyle a very small, sharp spicula of bone can be felt, threatening, seemingly, to perforate the skin, which is red and tender over it. This doubtless was torn up in the detachment of the external lateral ligament. Later, the redness and tenderness disappeared, as did the sharp spicula.

A persistent effort was made, under the influence of anæsthetics, to reduce the dislocation, but it was not successful, as could hardly have been expected, after a lapse of five weeks. This is the less to be regretted as the deformity is but slight and the mobility likely to be almost completely restored with time and proper care.

This is a rare accident—the rarest of all the dislocations occurring at this joint—only five cases, according to Professor F. H. Hamilton, having been placed upon record (vide Hamilton, "Fractures and Dislocations," 5th edition). Of these, one was mistaken for a fracture, as was the case here reported, and no attempt at reduction was made; one, Malgaigne failed to reduce, though recent, two were reduced with great difficulty at five and fifteen days, respectively, and one, diagnosed by Velpeau, was easily reduced immediately after the accident.

The anatomical construction of the joint explains the infrequency of the dislocation. "The inner half of the trochlea rises much higher than the outer, forming thus an elevated plane over which the articulating surface of the ulna must rise before dislocation can take place," and having once taken the leap and dropped down upon the condyle explains, also, perhaps, why it has proved so difficult of reduction in the few cases reported.

WOUND OF RECTUM.

ALEXIAN BROTHERS' HOSPITAL.—SERVICE OF DR. F. W. WESSELER.

T. N., aged 18, when admitted, was complaining of severe pain in the abdomen and constant desire to defecate. Appetite good, tongue clean, no fever, a light mucous discharge every half hour; had been sick three weeks. A physician had given him a prescription for worms, which had operated severely and increased his suffering. Thinking the vermifuge might have been a drastic cathartic and consequently irritated the mucous membrane of the large intestines, I ordered powders of bismuth and opium every three hours, milk diet, and rest in the recumbent position. Finding no improvement from this, I changed to plumbi acet. and opium, every two hours. The discharges diminished in frequency, but their character remained the same.

A more critical examination elicited the following facts: He had arrived, two months previously, from Germany; had obtained work with a dairyman; one day, while feeding the cattle, a cow gored him, the horn passing into the anus. He continued with his work, refraining from letting any one know of his suffering, for fear of being discharged. Finally, not being able to hide his condition altogether, he complained of a pain in his bowels. The physician that was called could not understand his language, and the patient, from modesty, refraining from calling attention to the accident, allowed himself to be dosed with vermifuges, until his mind had become thoroughly impregnated with the idea that it was the worms, and not the injury from which he was suffering. Upon examination I found an ulcerous wound one inch above the anus, in the walls of the rectum, one-half inch deep, and three-fourths of an inch wide.

Remembering the excellent results obtained by Professors Thomas, of New York, and Wood, of Philadelphia, in applying nitric acid to dysenteric ulcers of the rectum, I freely cauterized the ulcer, and controlled the tenesmus with opium suppositories. The part rapidly healed, and the patient was soon discharged cured.

TRANSLATIONS.

CÆSAREAN SECTION—MOTHER AND CHILD SAVED.

By Dr. G. Gaudin.

On the 2d of June, at 10 o'clock in the morning, I was called to see Mrs. Caillas, æt. 28, residing at Sables-d'Olonnes. She had been in labor since 1 o'clock in the morning.

The patient had enjoyed very good health during her pregnancy, and had arrived at full term; the midwife had been called when the pains first began, and after waiting and finding that, notwithstanding complete dilatation of the os, labor was not progressing, thought it necessary to summon me. I knew Mrs. Caillas, having attended her in an attack of intermittent; her waist was that of a dwarf, measuring 1.09 meters; the curvature of her legs and forearms and the size of her head were exponents of rachitic disease.

In making a vaginal examination, the finger came at once upon the prominence of the sacrum, and reached every point of the pelvic cavity with ease; the antero-posterior diameter of the upper strait measured but *five centimeters;* vertex presented in first position; the pains succeeded each other at intervals of five minutes, and were very intense; the membranes had been ruptured by the midwife.

Deeming surgical interference urgently necessary, I convinced myself of the fact that the child was still alive, and hastily summoned my colleagues, Drs. Bouhier, Petiteau and Billiotte, who kindly assisted at the following operation:

We had to choose between two methods of delivery, embryotomy or cæsarean section. Embryotomy is less dangerous to the mother, to be sure, but it consumes a great deal of time; the pains were already very intense, succeeding each other with great rapidity and threatening to produce rupture of the uterus; moveover, embryotomy is not without danger to a woman the antero-posterior diameter of whose pelvis is but five centimeters. I have seen the operation performed in the hospitals of

Paris four times by skillful practitioners in similar cases, who completely failed after two or three sessions of an hour each. For these reasons we determined to perform cæsarean section.

The patient was put completely under the influence of chloroform. Standing on the left side of the patient, I made an incision in the median line, beginning about two centimeters above the pelvis and extending to about four centimeters above the umbilicus. The uterus was opened with the scissors, and the child was seized by the feet and extracted at the moment when the meconium was passed. Fortunately for the success of the operation, the placenta was attached to the posterior wall of the uterus. The placenta was taken out with ease, and the womb contracted readily. The child was living, but artificial respiration had to be resorted to.

Before the mother had completely recovered from the anæsthetic, the womb had coutracted firmly, and without the loss of much blood. No sutures were necessary for the uterus itself, but the abdominal wound was closed with eight pins and figure-of-eight sutures.

The child, a girl, was of normal conformation and fully developed. All danger to the mother had not passed, however, for in the following night, she became very much excited, and vomited frequently. I was summoned in haste, and found the wound gaping, and a hernia as large as two fists protruding at the lower part of the suture. With the greatest care, I removed the three lower pins, and having satisfied myself of the integrity of the intestine, I reduced the hernia and replaced the sutures. Forty-eight hours after this accident, the patient became feverish, and the pulse rose to 120; frequent and violent vomiting, accompanied by severe colic, sufficiently indicated peritonitis. But these symptoms soon subsided, and the fever disappeared. The abdominal wound was constantly dressed with carbolized water, and cicatrization was complete on the eighteenth day. Subsequent profuse metrorrhagia brought the patient to the verge of the grave. This, too, was controlled by ergotine and perchloride of iron given internally, and the patient was finally enabled to get up, exactly four weeks after the operation.

At present, Mrs. Caillas has resumed her ordinary occupation, her child is thriving visibly, and both seem to have forgotten the dangers to which they were exposed.—[*Gaz. Hebdomadaire. Archives de Tocologie, des Maladies des Femmes, etc., Sept.*, 1878.

E. E.

DISLOCATION OF THE ATLAS.—RECOVERY.

By Uhde, Wagemann and Boettger in Braunschweig.

The authors report a case of bilateral dislocation of the atlas, in which the right inferior articular process of the atlas was displaced forward, in front of the corresponding superior articular surface of the axis, and the left inferior articular surface of the atlas backward, behind the corresponding superior articular surface of the axis, as shown by the position of the left transverse process of the atlas. The patient, a roofer, fell from a height of thirty feet. The head was rotated upon all three of its axes, the right half of the face being turned forward, the facial line forming an angle with the median line of the body, and the chin thrown forward, and the forehead backward. On the left side there was paralysis of the plexus pharyngeus and the hypoglossal nerve, on the right, simply paralysis of the glossopharyngeus. Careful anatomical and experimental research, the details of which cannot be repeated here, proved that the injuries of the nerves depended upon the dislocation. The nervous accessorius W. also suffered at a point corresponding to that on the hypoglossus, and to this the paralysis of the left velum palati, observed in the patient, was attributed, the plexus pharyngeus, of which the anterior branch of the accessorius forms a part, suffering by traction on the trunk of the nerve. The experiments also proved that, in this dislocation, the chord is not subjected to pressure, and that the vertebral artery is not injured. The dislocation was reduced two days afte the accident. Extension, extreme flexion of the head on the left shoulder and rapid rotation backward and to the right was practiced, together with direct pressure upon the left transverse process of the atlas, (second attempt). Reduction incomplete. The condition of the patient improved materially after extension had been made for some time with Glisson's apparatus. After the lapse of several weeks the patient was able to move his head in every direction. Barely a trace of the paralysis remained. —[*Arch. fur Klin. Chirurgei. Cbl. f. Chir. Medicin. Chirurg Rundshau, Sept.*, 1878. E. E.

SPINA BIFIDA.—EXCISION.

At a late session of the medical section of the French Association for the Advancement of Science, M. D-Laffitte reports a case of spina bifida, in which he removed the tumor in toto. The operation was performed on the 22nd of December, 1877, on a child nine days old; complete recovery at the expiration of twenty-five days. Neither paraplegia, nor paralysis of any internal organ nor of the integument, resulted. All functions are performed normally and regularly. It is especially noteworthy that the operation involved the division of ten or twelve nervous filaments and yet no physiological trouble occurred.

M. Dupré.—Cannot understand why the division of a nerve should not be followed by paralysis; it seems improbable; he must be permitted to doubt that the nerve had been divided.

M. Laffitte asserts that he has divided a branch of considerable size and has himself been astonished not to find paralysis.

M. Franck asks if any pulsations have been observed in the tumor.

M. Laffitte replies that no pulsations were observed in the tumor. The cries of the child simply increased its volume.—[*Annales de Gynécologie, Sept.,* 1878. E. E.

Blepharitis.—Dr. Roy ordered, in a stubborn case, a cotton-compress, covered with caoutchouc. By mistake, the mother of the child applied the patches of rubber directly to the diseased lids. They were kept on over night for two weeks before Dr. R. was again consulted, when, to his astonishment, he found that the blepharitis was entirely cured. He has since used this simple application in a number of cases, and always with success. The rubber patch is simply bound over the eye through the night, and the lids washed with warm water and soap in the morning.—[*Bull. Gén. de Thérap.—Med. Times, Dec.* 21, 1878.

REPORTS ON PROGRESS OF MEDICINE.

RECENT PROGRESS IN RENAL DISEASES.

By John Bryson, M. D., St. Louis.

Anatomy and Physiology.

Since it is their duty finally to deal with the products of the activity of all the tissues and organs of the body, the kidneys may be said, in one sense at least, to be more intimately connected with *all* the tissues and organs than any other glandular structures; so that we might lay under contribution, in this report, the literature of a vast field of physiology, and glean therefrom recently announced facts bearing more or less directly upon their functional actions; but this would be obviously beyond the scope of what it is intended we should do here, even did not considerations of space forbid. Interesting matters relating to digestion, the statistics of nutrition and the metabolism of tissues, bearing, not only on the physiology of the kidneys, but on renal pathology and the therapeutics of renal diseases as well, must, perforce, be omitted.

I have been unable to find any contribution to our knowledge of the termination of the renal nerve-fibres; and, so far as I know, the admission of Ludwig (*Stricker's Manual of Histology, p.* 475), that "anatomical investigations have not as yet afforded us any information concerning the termination of the nerves in the kidneys," still holds good. In view of recent clinical and physiological research, the time seems especially ripe for some investigation, with this object in view; for many facts, now in possession of the profession, are hardly explicable on the ground that the nerves of the kidneys have alone to do with sensation and the size of the small arteries (blood pressure.)

On this subject of the influence of the nervous system on the secretion of urine, M. Nepveu (who has been making researches on the influence of various traumatisms on renal action) recently read a paper before the French Association for the Advancement of Science, at its Havre meeting. "He has arrived," says

the *London Lancet*, January, 1878, "at the conclusion that the testes may, in certain abnormal conditions (such, for example, as follows injections of iodine into the tunica vaginalis, and in neurses of the testis), be the starting point of reflex action affecting the urinary secretion. This reflex action, looked at especially as a result of injections of iodine into the tunica vaginalis for hydrocele, is exhibited by a series of oscillations in the secretion, the first effect being oliguria or deficient secretion, which lasts for some days, and is followed by polyuria, succeeded by a return to the normal condition. This result of the injection of iodised solutions, M. Nepveu thinks, "may be regarded as an experiment which establishes the reality of a physiological connection between the renal secretion and irritation affecting the spermatic plexuses."

At the Hamburg meeting of German naturalists and physicians, Prof. Quincke gave the details of a series of experiments he had made upon the amount of urine eliminated in the morning after awakening, in a healthy person taking the same quantity of food and drink at the same hours, but on alternate days consuming water charged with, and water free from, carbonic acid gas. The drinking of the former was found to increase the discharge of urine in the course of three hours from seven to twenty-one per cent. The most probable cause of this increase appeared to be that carbonic acid gas promotes absorption. Other experiments, in which the subjects drank no water at all, on waking showed that the urine secreted during the morning was lighter and cleaner than the night urine, and there can be no doubt that during sleep the secretion of urine is greatly diminished, whilst it becomes very active during the earlier hours of the day.—*Lancet*, *Am. Ed.*, *Jan.*, 1878.

Before the Boston Society of Medical Science, Dr. Edes detailed the results of some experiments he had been making to determine the effects of phosphorus and mercury poisoning on the secreting power of the renal epithelium, as measured by its ability to separate the sulph-indigotate of soda. "In the kidneys," he said, "of animals poisoned with mercury, the epithelium of the straight tubes becomes dark, irregular, and loosened from its place; Calcareous degeneration takes place at the outer ends of the straight tubes. Such a kidney as this, although the visible alteration of the true secreting epithelium is but slight, secretes but very little of the indigo."

"During life, the urine from the animals thus poisoned, be-

comes clear and acid, (in the rabbit, the animal used in this case, abnormal), and contains albumen and casts."

"In a rabbit poisoned with phosphorus, we find the calcareous degeneration, but also the well-known fatty degeneration of both sets of tubes, except the lower portion of the large collecting tubes, in an extreme degree. The convoluted tubes may be almost completely cleared by the processes employed for making the section transparent, and then appear normal. They are, however, as shown by the indigo test, able to secrete only a very small amount of pigment."

"The urine contains large numbers of dark, granular casts, and is occasionally, though not invariably, albuminous."

"A kidney, the vein of which was obstructed, showed casts in the tubes and evidences of inability to secrete indigo."

These experiments were intended to determine "how far an epithelial cell, which had undergone degeneration, but which still retained its shape and place so as to appear nearly normal under the action of solvents which clear up fat, was capable of secretion. It would seem from them that a cell might be almost destitute of functional activity, and yet retain its place and form, and with exception of more (phosphorus poisoning) or less (mercurial poisoning) granular degeneration, its usual appearance.—[*Boston Med. and Surg. Journal, April*, 11, 1878.

It will be remembered that Heidenhain injected a quantity of the sulphindigolate, and after allowing a sufficient time to elapse for this to be nearly eliminated, injected a second quantity. He found that the second quantity was very imperfectly eliminated; it appearing that the epithelial cells had been exhausted by their efforts to eliminate the first injection.

In this connection some recent researches on the power of one kidney to perform the function of both organs are of interest. Bartels (Ziemssen's Cyclopædia, Vol. XV. p. 16), in mentioning the case of a woman one of whose kidneys had been extirpated by Simon, says: "The woman thus operated on passed 1,300 c. c. of urine on the twelfth day after the operation; and although later on, for the further six weeks she remained under observation, the quantity passed by her ranged rather below the ordinary diurnal average, it would have been impossible to regard her otherwise than in the enjoyment of perfectly sound health."

In a foot-note, the translator, Dr. Reginald Southy, ventures

to remark that the capacity of one single kidney to carry on the work of the economy is not to be disputed, but the entire sufficiency of such a single organ to maintain the health of an individual can be hardly held proven by the above instance. Health is always an equivocal term, and perfect health consists, in a certain amplitude of structural as well as functional endowment. His own experience has taught him that single organs, performing double duties, do them, for the most part, at a cost in extra wear and tear, which becomes more and more appreciated as life is prolonged. That the mal-functioning of such an organ does not admit of being recognized at first is a little surprising, but a little later evidence would be more valuable. He would like to know how this patient's kidney bore the extra tax put upon it a year or two subsequently to the operation."

Now, as affording most valuable information on this very point, as well as others, we quote the following from the *London Lancet*, American Reprint, July, 1878: "In the current number of Virchow's *Archives* Dr. Beumer has collected from various sources forty-eight cases in which one kidney was congenitally absent, and has carefully compared the conditions, associations, and effect of this malformation. This number of cases is considerably greater than any previous writer has collected, and the conclusions drawn from them possess corresponding value. From the circumstance that these cases were all recorded within the last twenty-five years, the condition, though uncommon, is not of extreme rarity. In forty-four out of the forty-eight, the kidney was entirely absent; in four it was rudimentary. The organ appears to be absent as often on one side as on the other, since in twenty-one cases the defect was on the right side, and in twenty-two it was on the left. It appears to be of more frequent occurrence in the male than in the female sex, since, of thirty-nine cases in which the sex was mentioned, twenty-six were males, and thirteen were females. It must be remembered, however, in estimating the value of this difference, that the number of *post-mortem* examinations upon men is larger than upon women, and the condition can only be diagnosed by an autopsy. When observations have been made upon the state of the vessels, they have been most commonly absent. In one case, although the kidney was wanting, a rudiment of the renal artery was

present, passing into the cellular tissue. In one case in which a rudimentary kidney existed, incapable of function, the renal artery did not exist. Similar variations in the condition of the ureter have been observed. In most cases the duct was entirely absent; in a few the portion of the ureter adjacent to the bladder alone existed. Of the bladder, one angle of the trigonum was absent in some cases, or the sulcus in which the ureter opens could not be detected on the side on which the kidney was wanting.

In most of the cases in which the kidney was absent the supra-renal body was present. In two cases it appeared to be enlarged, but it is probable that the apparent enlargement was the effect only of the change in shape consequent on the absence of the organ on which it is moulded. Förster asserted that the supra-renal body is always present in these cases of congenital absence of the kidney, and his statement has been generally accepted as correct. In five of the cases collected by Beumer, the supra-renal body was also absent. In one of these cases recorded by Schieber, there was a bicornuate uterus, and closure of the anus, the rectum opening into the vagina, between the caruncule myrtiformes. The subject of this curious malformation lived to the age of thirty years, and died of cerebral tumor.

This coincidence of an arrest of the development of the sexual organs with the defect of the kidney was not unfrequent, and constitutes one of the most interesting teratological points in the study of the malformation. The sexual malformation was present in thirteen cases, nearly a third of the total number; eight were females and five males. Of the latter cases, in one there was simply a diminution in the size of the corresponding vesicula seminalis and vas deferens; in another, the vesicula seminalis of that side was absent, and the vas deferens and testicle were small; and in another, the corresponding testicle, with the vas deferens, was absent. In an interesting case, recorded by Eppinger, in which the right kidney and ureter were rudimentary, although the male sexual organs were normally developed, there was, on the right side, a half vagina, an inch and a half in length, and a corresponding uterine cornu, an inch in length. In females, the associated irregularities of the sexual organs were more frequent, both absolutely and relatively, and these were also more considerable. The uterus was the organ which had most frequently suffered. In

a few cases the whole of the sexual organs, on that side, were absent—the ovary, half the uterus, and half the vagina. In several the uterus was unicornuate, the half of a bicornuate uterus being absent on the side of the defect. In some cases, in which a bicornuate uterus was complete, the vagina was double.

The remaining kidney was, in all the cases, considerably enlarged, and increased in weight and size; and with this increase was a corresponding development of the vessels and ureter. In twenty-six of the cases this enlarged kidney was perfectly healthy, and of these no less than eleven were over thirty years of age. This is a fresh and striking proof of the completeness with which the one kidney can carry on the functions of the two, without suffering degeneration in consequence of its increased work. But in no less than twenty-two of the cases the remaining kidney presented evidences of disease—an equally clear indication that the increased work, although entailing no necessary degeneration, does involve an increased liability to disease. In most of these patients the disease of the kidney was the immediate cause of death. The most common condition was chronic inflammation. It is evident that such diseases could be borne for a short time only; and this the details of the cases prove, since in many of them the bladder was completely empty, anuria having preceded death. The frequent occurrence of calculi in the pelvis of the kidney and ureter is worthy of note; they were found no less than ten times. This frequency is a point of much physiological interest in connection with the excretion of uric acid and the functional power of the single kidney. The danger of the condition in such patients is obvious, and is shown by the records of many of these cases, since in no less than five, a renal calculus, stopping the ureter, caused complete obstruction and all the consequences of retention of urine in the kidney, including rapid death.

The pathological aspect of these cases is alone the subject of Beumer's paper, but his facts suggest clinical applications of some importance. To one, only, of these we may allude. It has been remarked that the morbid state can only be recognized on the *post mortem* table, but the association, with defects of the sexual organs, suggests the possibility of suspecting its existence during life. In many cases the enlarged single organ might be felt. The occurrence in such patients of evidence of chronic

Bright's disease, without recognizable cause, or of grave symptoms succeeding those of renal colic, and even the occurrence of renal colic on the side opposite to that on which there exists a sexual malformation, might, in some cases, lead to a correct suspicion of the existence of the renal defect.

Albuminuria.

Prof. Leube, of Erlangen, has been recently making some investigations concerning the presence of albumen in the urine of persons apparently healthy. "He examined the morning urine of 119 soldiers, and found a trace of albumen in that of five, in one a distinct quantity, in the others a faint, just recognizable, trace. In each case the mid-day urine, also, contained albumen; in three the amount was larger than in the morning urine. So far the results are not surprising, since they would seem explicable on the theory that these soldiers were suffering from incipient renal disease, which, as is well known, may be unattended by any indication of deranged health. But it was found that albumen was present in fourteen soldiers out of 119, whose morning urine had been free from albumen. In all these instances the soldiers had undertaken arduous duty, marches or battalion drill, during the forenoon, but no food or drink had been taken during the exercise. No casts or blood were found in the deposit from the urine. The albumen soon disappeared with rest. This fact seems to show, that in apparently healthy men, exertion may induce slight albuminuria. This opinion was supported by an instance in which the urine of a soldier was for two days free from every trace of albumen, but on the third, after a long battalion exercise, it contained a trace, which had disappeared in two or three hours, and was also absent the next morning. In every case in which albumen was present any indication of disease, local or general, was carefully searched for, but none could be found. The conclusion Leube draws from his observations is, "that in the vast majority of cases, the urine of healthy persons is quite free from albumen; in rare cases a slight, but distinct, albuminuria coexists in a completely normal state of system, and is comparatively frequent if bodily exertion precedes the secretion of the urine."

"What is the origin of this temporary albuminuria? Our knowledge of the condition of urinary secretion is still too in-

definite to permit a satisfactory answer to be given to this question; but it may be explained on either of the current theories of urinary secretion—that of simple filtration of all the urinary constituents through the Malpighian corpuscles, and that of the specific secretion of the urine by the cells of the tubules. On the filtration theory, the absence of albumen from normal urine is accounted for by supposing that either the walls of the blood-vessels permit the passage of water through them, but retain the colloidal substances, as albumen; or else that albumen passes through the membranes of the Malpighian copsules, and is removed again by the epithelium of the tubules. On the theory that the transpirability of membranes depends on the size of these 'pores' Leube fancies that in some individuals these pores may be of such a size as to permit the passage of some colloidal albumen as well as of water; either constantly, under normal pressure, or occasionally, when the abnormal pressure is increased by exertion. On the theory that albumen is pressed out of the blood in the Malpighian capsules, and is removed subsequently by the action of the epithelum of the tubules, the exhaustion of this function of the epithelium, or its inadequacy, affords an equally facile explanation of the observations in question."

A form of chronic intermittent albuminuria, occurring in adolescents, has been observed by Dr. Moxon. It occurs in young men, generally between the ages of fifteen and twenty-two, and is characterized by the appearance of albumen in the urine at one time of the day, generally that passed after breakfast, and not at another. The first urine passed in the morning and that passed in the afternoon may be entirely free from albumen, but in a few the evening urine contains it. He has met with more than twenty cases of this kind, some of which entirely recovered. Interrogation of the various systems of the body failed of detecting disease, though the patients complained of general languor and indisposition to exertion.

Sir William Gull, in this connection, says he has frequently seen albumen in the urine of youths from sixteen to twenty-two, and regards its presence as the result of "atony of vessels and nerves." Dr. M. thinks that the frequent appearance of oxalate of lime in the urine of these patients is not without significance, and that morbid matters in the urine itself may have an irritating effect on the kidneys; and that the sexual

disturbances common to this time of life, may have an influence through the agency of the nervous system.

That a reflex irritation can set up an albuminuria, Dr. G. Gorrequer Griffith thinks is at least possible; and he says he has frequently met with cases that appeared to uphold this belief. He instances the case of a lady on whom he operated for fistula. The wound he dressed in the usual way, and in a few days symptoms of uræmia made their appearance, and caused him to look to the state of the urine, which he found loaded with albumen. The dressing was discontinued, the bowels cleared and diuretics given, and shortly the symptoms disappeared. In a few days the dressings were renewed, and again the symptoms appeared, compelling their abandonment. When the dressings were cautiously applied a third time there was no albuminuria and the wound healed. Dr. G. thinks that there is but little doubt that the dressings caused the albuminuria through the reflex activity of the nervous system, causing renal congestion, arrest of secretion, and transudation of albumen. What was a mere functional derangement at first, might, if not checked, eventually become an organic and incurable disease of the kidney.

It is but fair to remember that in this case and also in two cases, mentioned by the editor of the *Medical Times and Gazette*, of the intermittent albuminuria of adolescents, the patients all suffered from lung trouble. The former had been to Egypt on account of tubercular trouble, and the latter had suffered from chronic phthisis. As is well known, chronic pulmonary phthisis is not infrequently associated with amyloid degeneration of the kidney. E. Wagner found it in seven per cent. of his tuberculous patients (Ebstein). This, taken in connection with a case recently reported by Dr. Litten, (*Berliner Klin Woch.*) of amyloid degeneration without any albumen is not without significance.

Transitory albuminuria has been found in fifty-one out of one hundred and fifty-six cases of delirium tremens, by Weinberg. (*Med. Times, Dec, 8th*, 1877). The duration of the albuminuria coincided with that of the delirium; and as in no case was there found any pathological elements pointing to disease of the kidney, there remains no other explanation but that the symptom is due to alteration of innervation. The treatment was to diet, and perhaps to give a little alcohol and chloral.

Dr. T. Lander Brunton relates (*Practitioner*, *June*, 1877.) an extremely interesting case of albuminuria,—a case well worthy of the particularity of detail with which it is recorded. The patient, a delicate young man, *æt.* 33, had discovered nine years previously, that his urine was albuminous. For this he was given, by a medical man, strychnine in one-thirtieth grain doses. This stopped the albumen, but brought on violent headaches and sickness. At this early stage the albumen was present during the summer but not during the winter months; it came on with work and disappeared with rest. Even though the albumen ceased to appear, the patient lost health and strength. In 1870 the albumen returned more persistently, and a sea-voyage had but very little, if any, effect. Returning he tried pancreatic emulsion which at first stopped, but subsequently brought on the albuminuria to a greater degree. The skim-milk treatment was then tried for three months, at first with success so far as the albuminuria was concerned; but he lost weight rapidly, and the albumen gradually reappeared during the last two weeks of the treatment. In 1872 he went to Australia for three years. He now found that while he could take meat, with impunity, for supper, it always brought on albuminuria when taken in the morning, as did fatty food at any time. Exertion definitely increased and rest decreased the albumen. He did not gain much strength. Quinine caused a distinct increase in the albumen. In 1876 Dr. Brunton found, in him, no œdema; heart and lungs healthy; liver normal, and appetite poor; acidity and headache. The quantity of albumen was greatest when the urine was scanty, and least when the urine was abundant. Work brought on the albumen from eleven to two o'clock during the day; when at rest there was none. Nitro-muriatic acid now diminished the acidity and lessened, but did not completely remove, the albumen.

The fact that the albumen was greatest when the urine was scanty and least when it was abundant, led Dr. B. to suppose that it came, either from the venous radicles in the kidney, or from the lymphatic spaces in the connective tissue; and he attempted to act on the arterioles of the glomeruli and increase he secretion of urine with digitalis. The experiments of Dr. Power and himself had shown, he thought, that this drug d a pecial action on the blood-vessels; and he expected by its to contract the arterioles of the glomeruli, and thereby cause

an increase in the urinary secretion, and a diminution in the pressure of the capillaries and veins, thus removing the albiminous loss. An infusion of the drug, however, lowered heart action and interfered with digestion, and had to be discontined.

Though there was no history of syphilis, the alterative action of mercury was tried, but without avail. Quinine and sulphuric acid caused a large increase of albumin. Pancreatic emulsion also again failed of benefit.

He now determined to act on the secreting structures of the kidneys and with this object gave arsenic, in 3 minim doses of Fowler's solution, at meal times. At once the albumen disappeared, and the patient could do more work without fatigue or a reappearance ot the albumen in the urine. On stopping the arsenic the albumen returned, again to disappear on continuing its administration.

Reviewing the case, Dr. Brunton thought it probable that the albumen was derived, in great measure, from the intestinal canal, and was due to imperfect digestion of albuminous substances, which, being absorbed from the intestine, were excreted with the urine in much the same way as a quantity of raw egg—albumen—would have been, had the person swallowed such eggs. It seemed probable that imperfect pancreatic digestion was the cause of the appearance of albumen in the urine; and he supposed that the pancreatic digestion was at fault by reason of the gastric acidity, effected by the fatty foods, being too great, greater, in fact, than the pancreatic juice could overcome; so he gave pancreatin without the fat, so as to increase the pancreatic digestion without increasing the acidity of the stomach, and this stopped the albumen also, though sufficient time had not elapsed for him to determine what the final result would be. He was. however, inclined to regard the case as due, at least in part, to imperfect digestion, and was uncertain whether the kidneys had anything to do with it or not. There was no history of nephritis, and the close connection between the digestion, which was weak in the forenoon and stronger in the afternoon, the acidity of stomach and albumen in the forenoon and the want of these in the afternoon, seemed to point to the indigestion as the chief cause of the albuminuria. He had not seen any casts, though the urine was not frequently examined for them. Then, again, the

albuminous body that appeared in the urine was probably not serum-albumen, because it only coagulated between 175° and 180° F., while the albumen, in a case of chronic Bright's disease he had tested for the purposes of comparison, coagulated at 140 ° F. The point of coagulation varies somewhat according to the amount of urea and uric acid present in the urine, but this variation would hardly account for the difference of more than 30° F. between the coagulating points of the albumen of these two urines.

This matter of the coagulating point of albumen, in albuminous urines, is one of great interest, and is the subject of a recent communication by Dr. Brunton and Mr. D'Arcy Power. They found that it ranged from 144° to 180° Fahr. in five cases of Bright's disease. In accordance with previously known facts and their researches, this difference depends, in part at least, on the acidity and the amount of neutral salts in the urine, which lower the coagulating points, and partly on the amount of urea present, which raises it. So great is the effect of urea that, when it reaches 25 per cent of the mixed solution of serum-albumen and urea, coagulation ceases. On the other hand, the coagulation point is lowered by uric acid. When albuminous urine is diluted with water to a specific gravity of 1005, the coagulating point of the albumen is lowered, but is not thereby rendered constant. These differences in the coagulating point appear to be due, not alone to the existence of serum-albumen in the urine, but to the presence of the products of pancreatic degestion, which coagulate at higher temperatures the further the process of digestion has gone on, though their coagulating point is much lower than that of serum-albumen—about 160° F.

The effect of food on the coagulating point was generally, though not invariably, to lower it.

The coagulating point is not sufficiently constant in different diseases attended with albuminuria, to infallibly indicate the nature of each disease; but the authors' remark, "that the great difference between the urine of a case of waxy kidney, in which the coagulating point was about 162° F., and one of chronic Bright's disease, where it was 132° F., cannot be regarded as unimportant."

The effect of food in causing albumen *to appear* in the urine only after eating, led, in two cases, to an examination of the

urine for the ferments and products of gastric and intestinal digestion. It is known (Brüke, Cohnheim, Foster) that pepsin is normally present in urine. In these cases it was not found. Trypsin (pancreatic ferment) and ptyalin (diastatic ferment) were, however, detected, as wall as paraglobulin, in small quantity. In one case, in company with petones and some other bodies closely allied to them, a little glycogen was probably present.

Dr. Brunton thinks, in view of the discovery of pancreatin (trypsin) in the urine that its loss in unusual quantity may possibly prove injurious to the digestion, and one cause why the albuminous products of imperfect digestion appear in the urine. This would seem to point to a vicious circle, set up in this as in other diseases, the albuminuria causing the excretion of pancreatic ferment, and the loss of the latter leading to imperfect digestion, with excretion of its soluble products. Further observations are wanted, and may show that some cases of albuminuria are almost, or entirely, due to disordered assimilation; and this would have a decided influence on the treatment.

(*To be concluded.*)

Dr. O. F. Wadsworth, of Boston, speaking, in a recent communication, of the diagnostic value of albuminuric retinitis, points out that the appearances described as most typical of Bright's disease have been found in cases of cerebral tumor, leucocythæmia, and meningitis; and he concludes that they are not sufficiently characteristic to allow of a diagnosis being based upon the retinal changes alone. He appears to mistrust observations in which the occurrence of the retinal phenomena have preceded albuminuria. He remarks that Wagner found, out of 157 cases of Bright's disease, eighteen in which there were changes visible to the opthalmoscope, and only ten of them exhibited changes such as are attributed to albuminuric retinitis. Dr. W., in examining ninety cases, detected white patches or dots in the retina in fifteen, but in three the appearances were not characteristic. In only two cases was there the stellate appearance of the macula.

EDITORIAL.

DR. A. J. STEELE, *Editor.* DR. W. A. HARDAWAY, *Associate Editor.*
PROF. E. W. SCHAUFFLER, M. D., *Corresponding Editor.*

"It is not so much what you ought to do, as what you ought to know not to do."—*Sir Benjamin Brodie, Lectures*, 1837.

SALUTATORY.

"How blessings come with the advent of the new year," exclaims the reader. The COURIER, with cordial and kindly greeting, hopes to be a blessing to all its friends, not only in this present, but ever as the months roll on. We have entered on this work with a conviction of its necessity, and with a determination to make it a success. And first, as to the *necessity:*

All observing physicians are painfully aware of the fact that the profession of to-day is not what it should be—is not what it might be.[1] It is greatly wanting in high culture, in a thorough knowledge of the most advanced facts of medicine, in strict ethical conduct of its members one to another and to the profession at large; in concert of action looking to the organization of medical societies, to the elevation of the standard of medical education, to the passage of laws protecting the public from charlatanism, and to the more general establishment of health boards. Now, medical journals are most potent to remedy these ills; they become, to the busy practitioner, a "post-graduate course," and are more responsible for good than any other single influence affecting the profession. Books are not largely read—are mostly a convenience for reference; societies reach a minority, only, of

1. We say this in no disparagement of our own noble calling, for the same can be asserted of each of the learned professions.

the profession, and convene too seldom to be productive of the greatest good. But it is the medical journal, a frequent and regular visitor, easily handled and accessible, with short and practical articles, a veritable newspaper, reflecting the doings of the medical world, and coming in contact with the practitioner to edify, that above all else, influences. Therefore, while on the one hand these errors and imperfections exist, and while, on the other, journals are powerful to remedy, there is certainly need for one more, which, like our own, will strive to cope with, to modify, to improve.

Second, as to our *success*. Is it not assured, with substantial means at our command; with ambition and zeal and willingness to work; with ability (as must be acknowledged by reference to our list of reporters and collaborators); with a consciousness of, and a pride in the nobility of our profession; with a knowledge of its needs, and with an earnest striving to sustain and build it up in purity and truth; with clinical and professional material, such as a city of 500,000 inhabitants can furnish, and with a commonwealth back of it (levied under contribution) of 2,000,000 of souls? Certainly most auspicious is the outlook. And this, our confidence, is not overweening, as we could show by commendatory expressions received from many physicians throughout the State.

In answer to the objection urged, that there is too much machinery about our plan of organization, we would say: the *Boston Medical and Surgical Journal*, the oldest (with a single exception) in the country, and one of the best, is established on a somewhat similar plan, as also is the Chicago journal. Medical colleges are composed of many professors, laboring to a single end; medical societies are made up of many members, and yet there are successes among them. So long as a republican form of government is not a failure, so long may we hope to conduct a medical journal on the plan of many, united and working harmoniously to one object. By the co-operation of numerous qualified contributors, in the different departments of medical science, the greatest extent and variety of information will be furnished, and that, too, of the latest and most ad-

vanced views entertained, both in this country and abroad, distinguishing, especially, the true from the false, the good from the bad. But let it not be supposed that, because we present so formidable a corps of special writers, that our contents will be limited to their work alone. No ; for while so great a number of engaged laborers presages the certainty of—if not a feast, at least—a wholesome meal at each monthly repast, yet additional contributions will be sought for from all those, in every quarter, who have new and instructive facts to give the profession.

Pride, and labor, and self-interest are more or less local in their scope—as found in the family, the "set," the town, the county, the state. So we, with headquarters at St. Louis, will find our local or special field in our own Commonwealth. We want the profession of Missouri to feel that the COURIER is their journal, and that it will regard their interests paramount. Our experience with physicians throughout the State has shown that there is much intelligence and ability among its village and cross-road doctors. To bring these out and keep them bright is our desire. Our State reputation at the east is not enviable ; it suffers because we are not better known.

Encouragement will be given to the organizing and perfecting of local medical societies, which may thus become tributary to the State Medical Association, and so indirectly to the National Medical Association. Space will always be found for reporting the proceedings of such organizations.

One of the most important achievements of the profession within the past few years has been the establishment of State boards of health in many (fifteen) of our commonwealths. Interest in this matter should not flag until every one of the States are so blessed ; then (possibly sooner) will follow a national bureau of medicine, or public hygiene, which may be both an advisory and executive body, with power, such that, in an epidemic (as recently witnessed), it could control parties and means to the saving of thousands of lives and millions of money. To furnish information in regard to, and to urge the establishment of, a

state board of health for Missouri, will be our constant endeavor.

That hackneyed of all themes, elevation of the standard of medical education, which, happily, of late has found expression in the radiance rising over the eastern hills—we refer specially to the advanced action of Harvard and the University of Pennsylvania, attributable greatly to the improved thought of the day and to the increased maturity of our country, but also to the urgency of the profession at large—will find an earnest advocate in the COURIER, for much remains to be done, and the clarion note cannot too frequently nor too loudly be sounded, as we in Missouri so fully realize.

We do not take the pen with the intention of crowding any of the already existing worthy journals; the field is large, and much of it unoccupied. One-third of the profession of the west are not subscribers to a reputable medical journal; it will be our aim to reach these derelict ones. Many take a journal without perusing it. To induce such to read, by furnishing practical matter, concisely put, and in an agreeable form, will be our hope.

The profession will not be a loser by the establishment of another journal. A new competitor in the field will stir up emulation with the old, resulting in fresh vigor, increased laborers, and more matter.

It shall be our aim, in reviewing new books, to criticize with a free, impartial and independent pen; on the one hand, exposing defects and delinquencies—however unpalatable it may be to authors—and on the other, commending the true and good, and pointing out the new. Such action alone would become us as judges, or as members of an honorable and enlightened profession. We will not curry the favor of book publishers in order to accumulate a library. The good of the profession will be paramount to every other interest, and thus we will not recommend a work merely because it may have been sent to us gratuitously.

The name chosen for our journal is eminently fit—

COURIER—swift carrier of valuable dispatches—an argosy, freighted with medical intelligence, borne promptly each month to our subscribers.

We make no apology for placing the vignette medallion of John Hunter on our title page. In his day he was foremost among those laboring in the fields of anatomy, physiology, surgery and pathology; exact in his statements, because founded on personal investigation; rarely venturing a theory, but, when doing so, having a show of reason for it, and in most cases it seemed as though he was endowed with a prophetic ken, so certainly has the present opened up facts proving the correctness of his mere guess. As we observe that colossal monument—the Hunterean museum, and realize that it was reared by the individual labor and exertions of one man, we are spurred on, and encouraged to continued and repeated efforts towards increasing our stock of knowledge, and to the giving somewhat of value to the profession and to the world. May we, friends and all, ever be imbued with the indomitable spirit of John Hunter. The likeness is a very excellent copy of Sharp's famous line engraving, after the painting by Sir Joshua Reynolds, now in the London College of Surgeons.[1]

We will not further multiply words; our bow is made, and to our friends, the essay is before you. We sincerely trust it may prove so acceptable that you will desire a monthly reissuing of it in the year to come. A. J. S.

MEDICAL JOURNAL ADVERTISEMENTS.

Many of the most respectable medical journals in this country, while loudly protesting their devotion to the strictest interpretation of professional ethics in their pages, no less flagrantly contradict their theories by inconsistent practices on their covers. Nostrums, that are condemned within, are advocated on the outside of these magazines. A casual glance at almost any of the medical periodicals

1. Unquestionably the foremost portrait in English art. * * * here the engraver united his rare gifts with those of the painter.—*Sumner*.

of the day, with some honorable exceptions, will convince any impartial observer of the truth of these assertions. Selecting at random, we find in a well-known medical journal the following advertisements: "Throw Physic to the Dogs! Dr. ——'s Electric Belts. For the cure of all nervous diseases * * * * is applicable to either sex, and affords *instantaneous* relief in the following diseases:" and then are named, in display type, ten different affections, with a modest *et cetera* at the conclusion; thus kindly leaving the remainder of human ailments capable of cure by this means, to the imagination of the intelligent practitioner. A quarter of a page is devoted to the marvelous efficacy of these belts in "those disorders arising from youthful indiscretion." In addition, we are regaled with a list of false certificates from the *Lancet*, Ferrier, B. W. Richardson and others. Richardson, the chaste writer and distinguished scientist, is made to declare that "You have perfected a great blessing on suffering humanity." In the same journal, as also in one or two others that we have looked into, appears a whole page devoted to the claims of a quack remedy, manufactured and sold by a man who has been exposed over and over again as a notorious impostor. The contents of this magazine are always of an admirable character; its circulation is extensive, and it numbers among its contributors some of the best names in American medicine; yet such is the nature of the advertisements, that month after month meet, and, for the honor of the profession, we should like to say insult, the eyes of its readers. Turning to other journals we find electric discs, guaranteed to cure a multitude of ills; uterine supporters, characterized as being "the most perfect ever invented;" patent medicines, secret formulæ, eclectic and homœopathic preparations, etc., etc., *ad nauseam.*

Some go out of their way, even, to advertise lottery schemes, chromos, and other questionable matters of a like character. Many pages are flooded just now with accounts of wonderful drugs, with Spanish names, which are said on good authority to have no botanical existence

whatever. It has been said, and with great truth, that the religious and lay press do more to promote quackery than all other agencies combined; yet, in view of the foregoing facts, it would be well for us to be exceedingly cautious in our denunciations of others, until we have cleansed our own Augean stables. It is not always an easy matter to determine what is legitimate for a medical journal advertiser, because custom and lax methods have sanctioned much that should be excluded, and manufacturers have become correspondingly impertinent in their announcements. We allow to others what we do not permit to ourselves. No physician is accorded the privilege, even if he desire it, to advertise for his own benefit a drug or combination of drugs, which, from intrinsic merit, might prove financially valuable to him—he must give of his knowledge, freely and fully, for the welfare of humanity; but the druggist not only blazons on our pages his secret formulæ, but has the assurance to inform us, supposably educated physicians, when, how, and for what his nostrums should be administered. Like the stage and the public press, a medical journal is but the reflex of the *morale* of its constituents, and many things are admitted under protest by conscientious journalists, to meet the demands of those who have but a superficial knowledge of the subject, and are too busy or too heedless to look at it in its ethical aspect. Again, if current literature were more generously patronized than it is, there would be less necessity for financial pabulum of a dubious sort. At any rate, as the matter stands at present, while a journal may advertise proprietary and semi-proprietary remedies that are universally used and endorsed by the medical profession, such remedies should recommend themselves by their own merits, and no magazine ought to soil its pages by paid and fulsome editorial notices and laudations of them. The COURIER hopes to effect some reform in this direction. We have already rejected a number of advertisements, which we thought conflicted with the statement, made in our prospectus, that "a few pages will be devoted exclusively to

matters pertaining to the profession;" and we pledge ourselves never knowingly to violate either the spirit or the letter of that promise. W. A. H.

THE OTOLOGICAL JOURNAL.

More than two at a birth is luck, so that the half dozen other journals that, with the COURIER, have started in the race, with the advent of this new year, may expect good fortune to attend them. And we would especially congratulate the *Otological Journal* at finding birth in these auspicious times. With such men as Blake, Burnett, Buck, Spencer, etc., looking after and responsible for the contents, and Wm. Wood & Co. serving it up in the unexceptionable style of that most excellent house, all ear-men, at home and abroad, may expect a rich quarterly feast, and all practitioners interested in otology will find in our confrère the best and latest facts in that special department.

The establishment of the *Otological Journal* certainly marks an era in medical progress. Dentistry was once included in general medicine, but now with her ten thousand votaries and several special journals and schools, she takes rank as a distinct profession. Ophthalmology comes next as a recognized specialty, near it gynæcology, and the mind and nervous system, and now the ear—already with a national and profitable Association—essays the establishment of a special Journal. All these changes in medical practice are steps upward, not to be retraced, but to go onward and to expand. And, this too, is right; it is the natural fruit of increased knowledge.

The COURIER wishes its fellow infant, the *Otological Journal*, a *bon voyage*. A. J. S.

CORRESPONDENCE.

FROM NEW YORK.

Mr. Editor:—The end of the summer season, the return of patients and physicians from the seaside and country, is each year characterized by renewed activity, not only in actual practice and the re-opening of the medical colleges, but by brain products of more or less value which find their way into the journals. If it were not for this annual cessation from routine practice, I doubt whether most of the material gathered throughout the year would ever be reduced to the shape of a publication. As it is, we may always safely look in the autumnal season for the condensed results of pathological, histological and therapeutical labors of past months.

The lectures of Prof. Seguin, clinical lecturer on diseases of the nervous system in the College of Physicians and Surgeons, on localization of spinal and cerebral diseases are well worth perusing. Eight of the series of lectures have now appeared in the "Medical Record." Ferrier's diagram is, of course, the foundation for all deductions. To this has now been added a mapping out of the regions upon the external surface of the skull. At first glance this would look like an endorsement of the ancient phrenological humbug, but this is dispelled by the fact that the doctrine of localization has been verified both in medicine and surgery. There is no attempt at localizing passions and qualities, but the determination of the relations between the external surface of the skull and the principal gyri and sulci of the brain by external topography on the one hand, and the localization of certain sensitive and motory manifestations, as well as of the ultimate starting point of special senses, on the other. Especially is it found to be of value in local paralytic and paretic conditions. I need only add that several brilliant surgical operations have been performed, upon indications derived from this newly-acquired knowledge of cranial topography, to show what the future may have in store for us in that specialty.

The "determination of sex in utero," is a theory so startling and suggestive, that a few words in regard to it will not be amiss. The theory originated from a suggestion by Dr. C. Heitzmann, one of the best, if not *the* foremost, histologist of the present time, and now resident in this city. Dr. H. tells me that he never intended to promulgate it as a "theory," but has merely suggested it to others, among whom is Dr. Swift, of Boston, who first published it in the *Boston Medical and Surgical Journal.* The suggestion in a nutshell is this: "The ovum represents the female element, the spermatozoon the male. If the ovum becomes impregnated by a few spermatozoa, the female element will be in excess, and the result a female. If, on the other hand, a good many spermatozoa impregnate the ovum, the male element will preponderate, and a male will be the result." In addition to this it is argued, that if the ovum is high up—in the ovary or in the fimbriated extremity of the fallopian tube—probably only a few spermatozoa will come in contact with it; but if the ovum is low down, then the spermatozoa will be in excess.

Dr. Swift has thus far tested the rule in twenty cases, with surprisingly satisfactory results. Hundreds of cases, however, would have to be well established, and the theory ought to be applicable to the whole domain of comparative anatomy. But the refutation, as furnished by Dr. Neftel, of this city, in the "*Medical Record*" of Nov. 9th, is calculated to mislead. He says that the ovum can be impregnated only by a single spermatozoon, because by a most perfect mechanism the ovum, after the penetration of a single spermatozoon, is entirely protected against the intrusion of any other. Not only is this the case with ova provided with a special opening—micropyle—but in those destitute of a micropyle.

Dr. Heitzmann in answer tells me, that often, very often, has he and others seen numerous spermatozoa enter the ovum. When a histological authority like Dr. H. states such a fact, it is to be accepted as a fact, and objections should be raised only by those of more familiarity with histology than the average practitioner is commonly blessed with.

A movement is on foot for the establishment of a "United States Board of Health," whose duties shall be to advise the Government, and the Executives of States as well, on all matters relating to the prevention and cure of epidemics, and in

general keep a weather-eye on public health at large. I am astonished to find so many of the older and wiser heads of the profession in favor of a measure, the absurdity of which is best illustrated by our own Board of Health. To my mind nothing is so ridiculous and utterly out of place than these spasmodic efforts to instruct and at the same time overawe the "dear public." The *intention* is always good, and so much may be said of our board also. But what of these good intentions that can be actually carried out in a mixed community of people, used to having their own way, can be readily enough done by the police authorities. They are the only authority whom the people at large will recognize. Everybody and everything else is looked upon by them as an intrusion upon their sacred rights in connection with life, liberty, and the pursuit of happiness. When you come to apply the test to the country at large, ruled as it is by influences far removed from scientific impulses, a board of the best men can be naught but a political machine, used for political purposes. *Vide* the Washington Board of Health, in which men who had been summarily read out of the profession, held high revel. In any event, the establishment of a dictating bureau is possible only in a monarchical country, where civil service is an established fact and not a nightmare.

In my next I will tell you of some pathological and histological researches now in the course of development, as well as the current news of appointments and deaths, which latter, let us piously hope, may be few and far between.

Truly yours,

J. Hilgard Tyndale, M. D.

The profession of New York has been greatly favored by a visit from two distinguished Londoners, Dr. Andrew Clark, F. R. C. P., and Mr. Callender, Surgeon of St. Bartholomew's. The reception tendered these gentlemen was most cordial; they were *féted* and gave expression to the warmest feelings of regard for their professional brethren in America. Dr. Clark gave his views on pulmonary phthisis, before a crowded audience of the profession, at Bellevue, the day preceding his departure. The lecture was illustrated by many plates in water-colors, painted from pathological specimens coming under the Doctor's own eye. There was but one opinion as to the excellency of the lecture. Dr. Clark has gained a deserved popularity and made many friends by his visit.

COMMUNICATION.

Mr. Editor:—As anything bearing on the subject of yellow fever, just at this time, must be of interest, whether touching on general or of special cases, we beg to communicate the following on *Dr. Ford's "case of Urinary suppression in Yellow Fever, etc."*

In behalf of a generous and self-sacrificing man, who lost his life in the discharge of his duties while administering to the suffering refugees lately at St. Louis Quarantine, we feel that it is our duty to carry out the wish and intention of Dr. H. C. Davis, namely, to correct certain statements made by Dr. W. Hutson Ford in an article published in the September No. of the *St. Louis Medical and Surgical Journal*, entitled, "A case of Urinary Suppression in Yellow Fever, etc.," and, in doing so, will take the liberty to mention such statements as were underlined by Dr. Davis, and pronounced by him as *incorrect*, as follows:

1. "On the morning of the 24th inst. had chilly sensations and pain in the back."

2. "He had high fever at this time, viz: on the 26th inst."

3. "Fever continued high."

4. "On the night of the 28th he felt much weaker and the pain in the back and head became so intolerable that the next morning a hypodermic injection of morphine was given him."

5. "It was thought advisable by the physician in charge of quarantine to pass a catheter." (Here follows a marginal note written in the pamphlet, which can be had for reference by any one so desiring.) "Catheter was passed by his (Dr. Ford's) request by Dr. Outley, after I, told him, (Ford), it was a case of suppression. DAVIS."

6. "I had carefully refrained from passing it, and it was done without my consent and entirely in opposition to my intentions."

Prior to the evening that Dr. Outley passed the catheter we happened to be in the room of the patient, with Drs. Ford and

Davis, we there saw Dr. Ford oil a catheter and attempt to introduce it, and heard Dr. Davis tell him it was a case of suppression, and that there was no water in the bladder, whereupon Dr. Ford put the catheter upon the table.

The treatment of yellow fever by the "superoxygenated air theory" may be a good one, but it certainly did not prove to be of any particular value in this case. But he (Ford) says that when he first saw this case it was of "necessary fatal prognosis." Then why, we ask, did he select this particular one for experimentation, when Dr. Davis had allowed him to choose from a number of cases which were there at the time?

The terrifying effects produced by the huge gasometer at the bed-side, the rest and sleep which were so much needed at this particular stage of the disease and of which he was robbed for the purpose of inhaling oxygenated air, did most certainly counterbalance the beneficial effects which were hoped to be gained.

W. B. Dorsett, M. D.
F. T. Outley, M. D.

City Hospital, St. Louis, Dec. 19, 1878.

CHLORAL AS AN ANÆSTHETIC FOR CHILDREN.

Dr. Bouchut recommends the use of chloral as an anæsthetic for children. He gives one dose not exceeding forty-five grains, in children under three years of age. In half an hour the patient is asleep, and in an hour insensible. The anæsthetic lasts from three to six hours, and is followed by no unpleasant consequences. Thirty grains of chloral may be given without danger to children between two and five years of age.

BOOK REVIEWS AND NOTICES.

BOOK REVIEWS.

LECTURES ON CLINICAL MEDICINE: Delivered in the Royal and Western Infirmaries of Glasgow. By DR. MCCALL ANDERSON, Professor of Clinical Medicine in the University of Glasgow. With illustrations. *London: Macmillan & Co.* 1877. 8vo., pp. 268. Price, $3.00.

Dr. McCall Anderson is so well and favorably known as a contributor to the literature of practical medicine, that the simple announcement of the above work is quite sufficient to insure its perusal; but we are glad to add our recommendation, which may, perhaps, to some of our readers be an additional inducement to do so.

The present volume is in accordance with the steadily increasing demand for books on medicine, which treat of the subject in a decidedly practical way—just as this one does—giving us cases occurring actually in the practice of a busy physician, and of one who can describe faithfully and truly what he sees—giving us the plain facts, and such details as are absolutely necessary, and dwelling as little upon theories as possible. It is just such books as this that we find most valuable, instructive and helpful in our every-day rounds, as well in the treatment as in the diagnosis of obscure cases, with which we are all apt to meet. We have libraries of systematic treatises upon the practice of medicine in every language and in every style, and it is not too much to say, that we may, without loss, dispense with any further publications of this kind for the next ten or twenty years. What we want now are just such books as this of Dr. Anderson, viz: cases carefully and accurately related, with sufficient clinical details, written in a style which shall insure against becoming tiresome, and an account of *post mortem* appearances sufficiently clear to show their relations to and connections with the symptoms and signs during life.

Students and young practitioners of medicine are apt to rely too much upon regular standard text books, forgetful that the pictures of disease therein portrayed are drawn either from

typical cases, or else based upon the phenomena of a great number of individual cases of any particular form of malady which they are intended to represent: when he comes to apply these pictures, however artistically painted to the realities, he not unfrequently finds a want of correspondence which leads to disappointment and confusion, which can only be corrected by a larger experience.

But, with a book like this in his hands, he has a hospital before him, and with, of course, a certain amount of preparation to enable him to appreciate its teachings, he may, by its careful study, learn almost, we wont say quite, as much as by going to the bedside under the guidance of an accomplished instructor.

We have found several lectures especially interesting, particularly those on tubercular peritonitis, galloping consumption, aneurism of arch of the aorta and cirrhotic form of Bright's disease.

The style is clear, precise and attractive, and the volume is certainly a valuable addition to the literature of clinical medicine. P. GERVAIS ROBINSON.

THE PATHOLOGICAL ANATOMY OF THE EAR. By HERMANN SCHWARTZE, M. D., Professor in the University of Halle. With the author's revisions and additions, and with the original illustrations. Translated by J. Orne Green, A. M., M. D., Aural Surgeon, Boston City Hospital; Clinical Instructor in Otology, in Harvard University. *Boston: Houghton, Osgood & Co. The Riverside Press, Cambridge.* 1878. pp., 174. Price, $2.00.

There has been no more valuable contribution to Otological literature in the last half century than is presented in the work before us. The conscientious devotion of the author to this department of surgery, and his known personal integrity, would have led us to expect very much as the result of his labors in this field. We promise that none who read will be disappointed.

After giving the literature of the subject and a general introduction, the author presents very minutely directions for making a dissection of the ear. He then takes up in order the several divisions—the temporal bone in general; the auricle; the external meatus; the drum-membrane; the tympanum; the Eustachian tube; the mastoid process, and the inner ear and auditory nerve. We may refer to the chapter on the tympanum as being of especial interest and value. Considering new-growths, his investigations confirm a position which we took long ago,

that aural polypi arise, without doubt, from the mucous membrane of the tympanum, "even in cases where they appear to have their origin in the skin of the meatus, anatomical investigation shows that in reality they arise from the cavities lying above the meatus, which are a part of the middle ear, and lined with mucous membrane" [p. 124.] He makes but three species of polypi by their histological structure —the mucous, fibromata and myxomata. Dr. Buck, of New York, has added another variety to these—the angioma—and incidentally we may use this to illustrate the only adverse criticism which we have to make (and which applies throughout the work), that too little credit has been given to other than German laborers.

The translation has been most excellently rendered. The typography is such as we would expect to find coming from the Riverside Press. H. N. SPENCER.

A MANUAL OF PRESCRIPTION WRITING. By MATTHEW D. MANN, A. M., M. D., Examiner in Materia Medica and Therapeutics in the College of Physicians and Surgeons. New York, etc., etc. *New York: G. P. Putnam's Sons*, 182 *Fifth Avenue*. 1878. pp. VIII.—155. Price, 90 cents. (Through the St. Louis Book and News Co.)

This little book contains a full explanation of the methods of correctly writing prescriptions; a table of doses, expressed in both apothecaries' and metric systems; rules for avoiding incompatibilities and for combining medicines.

The larger works on materia medica and therapeutics do not give minute directions for prescription writing, and thus the necessity for manuals which, like this one, give the whole matter in a nutshell, and are especially valuable to medical students.

The prescription-files of any drug store will show how sadly deficient are even practitioners in this department.

Many valuable suggestions are given us by Dr. Mann, such as—that the prescriber should with his name, give his office hours, so that, if the apothecary be in need of further information, either on account of illegibility or an actual or a supposed mistake, or doubt as to certain points, he may know when to find the physician without going to the patient, and without even the knowledge of the latter. In case it is not desirable that the prescription should be repeated, without the special recommendation of the physician, an order to that effect may

be put on its face. Such an order will be followed by every responsible druggist.

The special value of this manual is its timely appearance with the metric system applied, giving the doses in grams, and tables for the convenient conversion of troy and apothecaries' weight and measure into the French. Full rules and explanations are given, simplifying what seems to so many practitioners a difficult and troublesome problem. We are coming to the metric system very rapidly, students are being taught it, and twenty years will see the change well perfected.

This book is four and a half by six inches in size, flexible cover, and convenient for the pocket. Every medical student (and not a few practitioners) should certainly have and carry one for a time. We would suggest that a second edition contain, in the posological table, the therapeutic properties of the drugs, and the correction of a few typographical errors, such as "peperitæ," on page 18, should be piperitæ, etc.

A. J. STEELE.

THE PHYSICIAN'S VISITING LIST FOR 1879. Twenty-eighth year of its publication. *Philadelphia: Lindsay & Blackiston.* Sold by all booksellers and druggists.

This time-honored pocket companion for the doctor contains an Almanac, Table of Signs, Marshall Hall's Ready Method in Asphyxia, Poisons and their Antidotes, Table for Calculating the Period of Utero-Gestation, blank leaves for visiting list, monthly and general memoranda, addresses of patients, nurses and others; accounts, wants, obstetric engagements, record of births and deaths, etc., with pocket, tuck and pencil, for twenty-five up to one hundred patients weekly, in single and double volumes, one edition interleaved. Price, $1.00 to $3.00.

BOOKS AND PAMPHLETS RECEIVED.

THE CELL DOCTRINE; ITS HISTORY AND PRESENT STATE: For the Use of Students in Medicine and Dentistry. Also a copious bibliography of the subject. By JAMES TYSON, M. D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, etc., etc. Second edition. Revised, corrected and enlarged. Illustrated. *Philadelphia: Lindsay & Blackiston.* 1878. Price $2.00. (Through the St. Louis Book and News Co.)

HABITUAL DRUNKENNESS AND INSANE DRUNKARDS. By John Charles Buckwill, M. D., Lond., F. R. S., Fellow of the Royal College of Physicians, etc. *London: Macmillan & Co.* 1878. Price, $1.00.

PRACTICAL SURGERY: *Including Surgical Dressings, Bandaging, Ligations and Amputations.* By J. Ewing Mears, M. D., Demonstrator of Surgery in Jefferson Medical College, Professor of Anatomy and Clinical Surgery in Pennsylvania College of Dental Surgery, etc., etc. With two hundred and twenty-seven illustrations. 12mo., cloth. *Philadelphia: Lindsay & Blackiston.* 1878. pp., 279. Price, $2.00. (Through St. Louis Book and News Co.)

PHYSIOLOGY: A TEXT BOOK OF. By M. Foster, M. D., F. R. S., Prælector in Physiology, and Fellow of Trinity College, Cambridge. Second edition. Revised and enlarged. 8 vo., cloth, $6.50. *Macmillan & Co., London and New York*, 1878.

INSANITY AND ITS PREVENTION. By D. Hack Tuke. Price, $1.75. *Macmillan & Co., London and New York,* 1878.

CLINICAL DIAGNOSIS. By James Finlayson, M. D., of Glasgow. *H. C. Lea, Philadelphia,* 1878. (Through St. Louis Book and News Company.)

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NOTES ON THE TREATMENT OF SKIN DISEASES. By Robert Livering, A. M., M. D., Cantab. F. R. C. P., Lond. Lately Physician and Lecturer to Middlesex Hospital, and Physician in charge of the Skin Department. Fourth edition. Revised and enlarged. *New York: Wm. Wood & Co.* 1878. 12mo., pp., 127.

LECTURES ON BRIGHT'S DISEASE OF THE KIDNEYS. Delivered at the School of Medicine of Paris. By J. M. Charcot, Professor in the Faculty of Medicine of Paris, etc., etc. Collected and published by Das, Bourneville and Levestre, editors of the *Progrès Médical*, and translated with permission of the author. By Henry B. Millard, M. D., A. M. *New York: Wm. Wood & Co.* 1878 Wood cuts and two colored plates. 8vo. pp. X.—100.

LECTURES ON LOCALIZATION IN DISEASES OF THE BRAIN. Delivered at the Faculté de Médecine, Paris, 1875. By J. M. Charcot, Professor in the Faculty of Medicine of Paris, etc., etc. Edited by Bourneville. Translated by Edward P. Fowler, M. D. *New York: Wm. Wood & Co.* 1878. Numerous wood engravings. 8vo. pp. VIII.—133.

A MANUAL OF PHYSICAL DIAGNOSIS. By Francis Delafield, M. D., and Charles F. Stillman, M. D. *New York: Wm. Wood & Co.* 1878. Illustrated by a dissected or superimposed plate, with printed transparencies of the surface of the body. 4to. Interleaved. pp., 30.

REST AND PAIN. Lectures delivered at the Royal College of Surgeons of England. By John Hilton, F. R. S., F. R. C. S. Surgeon extraordinary to her Majesty, the Queen, etc., etc. Edited by W. H. A. Jacobson, F. R. C. S., etc. Second edition. *New York: Wm. Wood & Co.*, 1879. Illustrated by 109 wood engravings. 8vo., pp. XII-299. (Wood's Library of Standard Medical Authors.)

DISEASES OF THE BLADDER AND URETHRA IN WOMEN. By Alexander J. C. Skene, M. D., Professor of Diseases of Women in the Long Island College Hospital, etc., etc. *New York: Wm. Wood & Co.*, 1878. Illustrated, 8vo., pp. VIII-374.

THE MAYOR'S MESSAGE. With accompanying documents (including reports of the Health Department, Clerk of the Board of Health, Sanitary Officer, Dispensary Physician, Superintendents of the City and Female Hospitals, Insane Asylum, Physician to the Poor House, Steward of the Quarantine Hospital, and Coroner), to the municipal assembly of the city of St. Louis, at its regular session, 1878. Octavo, paper, pp. 524.

SOCIETY PROCEEDINGS.

SOUTH-EAST MISSOURI MEDICAL SOCIETY.

The fourth semi-annual meeting of this Association convened at Cape Girardeau, December 3d, 1878, and was a most interesting and instructive session. Though the attendance was not as large as it should have been, yet those present entered fully into the true spirit and work of the occasion. The society is in its infancy, and yet is already on a firm basis, having a membership numbering forty, embracing the best physicians of that section of the State.

A number of valuable papers were read and discussed, cases from private practice were related, and two were exhibited, one being an operation on the foot by Dr. Wilson, and the other a fibrous tumor on the lower eye-lid, by Dr. J. H. Rider. Dr. W. B. Wilson made a pointed report as counsellor for Cape Girardeau County. Amended constitution and by-laws were adopted. Drs. W. B. Wilson, Henderson, and Harris were appointed a committee on petitions, and Dr. C. G. Wilson, Corresponding Secretary. Dr. Wm. Nifong, of Fredericktown, was appointed Committeeman on Diseases of Women; Dr. W. B. Wilson, of Cape Girardeau, on obstetrics; Dr. A. A. Boudurant, of Charleton, on cholera infantum; Dr. C. G. Wilson, of Cape Girardeau, on surgery.

The citizens of Cape Girardeau were exceedingly hospitable, the Turner's Hall and Court House being tendered for the use of the Association. On invitation of Professor Dutcher the members visited the normal school. Dr. Wilson gave the association a dinner, and the city members extended an evening entertainment.

Drs. Mann, of Perryville, and Rider, of Cape Girardeau, were requested to discuss the doctrines of humoral pathology at the next regular meeting.

The Society adjourned to meet at Charleston, Mississippi County, the first Tuesday in May, 1879, at 7 o'clock, p. m.

C. G. Wilson, M. D.
Secretary.

GRAND RIVER MEDICAL SOCIETY OF MISSOURI.

The fourth semi-annual meeting of the Grand River Medical Society convened at Jamesport, Mo., in Hutchinson's Hall, at 11 a. m., December 3rd, 1878. The President and Vice President being absent, Dr. D. T. Hanna, of Jamesport, was called to the chair. The minutes of the previous meeting were read and approved. Dr. J. M. Richmond, of St. Joseph, was introduced and gave an address on the benefit of medical associations. On motion he was unanimously elected an honorary member of the society.

Drs. Dewey, Donaldson, and Dent were appointed a committee on programme.

Adjourned until 1 p. m.

AFTERNOON SESSION.

Dr. B. N. Stevens, president, in the chair. Present, Drs. R. Barney, S. M. Beeman, of Chillicothe; T. Brown, Hamilton; M. Bottom, S. J. Dewey, F. J. Dent, G. H. Donaldson, Breckenridge; G. W. Hutchinson, D. Macy, D. F. Hanna, Jamesport; W. E. Black, J. T. Allen, W. M. Givens, Gallatin; A. H. Campbell, Lock Springs, and G. A. Goben, Jamison. Petitions for membership being presented from Drs. C. L. Weber, and W. R. Berry, of Trenton, and A. H. May, of Princeton, they were unanimously elected. The report of the committee on programme was accepted. The subject of dropsy was discussed by Drs. Dewey, Black, Brown, Hanna, Richmond, and Weber. Fractures were briefly considered by Drs. Barney, Donaldson, Bottom, May, Weber, Allen, Richmond, Campbell, and Hanna. A lively debate on skin diseases took place, bringing out nearly all of the society.

Adjourned, to meet at 6:45 p. m.

NIGHT SESSION.

President in the chair. Dr. Bottom offered a series of resolutions in regard to the death of Dr. T. R. May, of Chillicothe, who died Sept. 2nd, 1878. They were ordered to be spread on the minutes and a copy sent to the bereaved relatives. Dr. Richmond read an extended paper on "Stricture of urethra of large caliber," intending to show that any deviation from the

normal condition was a serious matter. Drs. Barney and Stevens reported a case of the same nature, which resulted in death. Dr. Stevens also read the report of a case of barrenness, examined by Drs. McArthur, Beeman and himself. The result seemed to show that the vagina was a *cul de sac*, no uterus or ovaries being discovered. Dr. Barney reported a case of complete absence of the anus, which he saw with Dr. L. E. Tracy, of Utica. A dissection of two inches did not reach the rectum. Meconium was passed through the bladder. Death resulted in ten days.

Dr. Richmond called attention to the prospectus of the "St. Louis Courier of Medicine and Collateral Sciences."

Adjourned to meet at 8:30 a. m., following day.

SECOND DAY.—MORNING SESSION.

Society met with Dr. W. M. Givens, Vice President, in the chair. The whole forenoon was taken up in reporting and discussing unusual and interesting cases which had come under the observation of the members.

Adjourned to meet at 2 p. m.

EVENING SESSION.

Dr. W. M. Givens, Vice President, in the chair. Dr. W. R. Berry, of Trenton, in the presence of the society amputated one set of phalanges of a double great toe on the right foot of a little girl. A resolution to change the constitution was laid on the table till next meeting. The President appointed Drs. A. H. Campbell, L. E. Tracy, D. F. Hanna, and T. W. McArthur delegates to the American Medical Association; and Drs. W. R. Berry, M. Bottom, G, A. Goben, and G. W. Hutchinson delegates to the Missouri Medical Association. Essayists for next meeting: Drs. G. A. Goben, C. L. Weber, T. Brown, and W. R. Berry. Committee on membership, Drs. J. W. Tuttle, S. M. Beeman, and F. J. Dent. Committee on arrangements, Drs. A. S. Cloud, R. Barney, and S. M. Beeman.

A resolution was adopted, thanking Dr. Hutchinson for the use of the hall.

Society adjourned to meet at Chillicothe on the first Tuesday of June, 1879.

T. Brown, M. D.,
Secretary.

ST. LOUIS OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Stated Meeting, Thursday, Sept. 19, 1878. Dr. S. G. Moses, President, in the Chair.

PLACENTA PRÆVIA—*By G. M. B. Maughs, M. D.*—An accident of so serious a nature as placenta prævia, or the implantation, in whole or in part, of the placenta over the mouth of the womb, although occuring but seldom, must have attracted the attention of accoucheurs from the earliest periods when midwifery began to be practiced as an art, and its phenomena investigated with the least approach to scientific interest. Accordingly we find this condition noticed by writers of the middle of the 17th century, as Guillemeau, Mauriceau, Astruc, Pugh and others; but these writers supposed that when the placenta was found in this position, it had been separated from its normal site, and had fallen to the lower segment of the uterus. Portal, who wrote in 1743, clearly describes this condition in nine cases. He was aware and taught that the placenta was originally attached to this site, and had not fallen there. Leveret and Smellie, in 1752, gave minute descriptions of cases, with their correct pathology. But the great English accoucheur, Rigby, first, in 1775, gave a full and clear view of this condition, with distinct rules of practice. He it was who gave the term, "unavoidable hæmorrhage," to placenta prævia, a term that has been used by most writers as synonymous with placenta prævia, and enforced rules of practice even to our day.

The *cause* of this anomalous implantation of the placenta, though the source of much controversy and prolific of theories, can scarcely be said to be obscure or doubtful, and is given in the well-known fact that it almost always occurs in the multiparæ.

At the time of ovulation, which is the menstrual act, the mucous membrane, which is the uterus, stimulated by the changes going on in the ovaries, becomes succulent, swollen, corrugated, closing the uterine cavity. After conception, this condition is greatly extended and intensified by the stimulus of the impregnated ovum—so much so, that, upon its arrival at the uterine

extremity of the Fallopian tube, it finds it obstructed by the swollen condition of the uterine mucous membrane; its further advance is arrested at this point, and its implantation at or near the fundus secured in all ordinary pregnancies. After frequent child-bearing, the uterus loses its symmetry, and perfect co-ordination remains larger—often more inactive its cavity less perfectly filled by the corrugated mucous membrane, and the impregnated ovum, upon its arrival at the cavity of the uterus, falls to the lower segment, where it becomes fixed, just as it would have done in its normal site, or had it dropped into the cavity of the abdomen, as in extra-uterine pregnancy.

In very rare cases of primipara, this condition may exist for want of correspondence of uterine with ovarian activity, or from some anomalous size or shape of the cavity.

The ovum falling to, and becoming fixed upon the lower segment of the uterus, necessarily developes placenta at this site, which, rapidly developing in every direction, spreads over the internal os and the entire lower segment, forming placenta centralis; or, the ovum may be caught in a corrugation or fold of uterine mucous membrane some distance above the os, in which case only its lower margin may reach to, or over the os, giving placenta lateralis, or partial placenta prævia.

The causes, then, of placenta prævia are not obscure or doubtful, for which fact we are not indebted to the many theories upon the subject, but to our advanced knowledge of the changes in the uterine mucous membrane, during, and associated with and caused by ovulation.

Symptoms: The synonym of "unavoidable hæmorrhage," first suggested by Rigby, and so long retained in connection with placenta prævia—though almost necessarily connected with this anomalous condition—the fore-coming of the after-birth is at fault, in that in very rare cases there may be no hæmorrhage, not even during labor. This may be caused by fatty degeneration of the placenta, having advanced so far as to cut off the blood supply and obliterate the uterine sinuses previous to the actual separation of the placenta at the os. Unfortunately this is very rarely the case—alarming, and heretofore unavoidable and unmanageable—hæmorrhage being the rule. Most generally the first indication of placenta prævia is a gush of blood, without warning—and this without regard to the position, or mental state, or the duties the patient may be

engaged in. Frequently this discharge corresponds with what would have been the menstrual period, had the woman not been pregnant, and is immediately dependent upon the periodical hyperæmia, continued, perhaps, in most women during pregnancy.

The first discharge—if the woman is not advanced more than five or six months, previous to which hæmorrhage is rare—may be, and often is, moderate in quantity, ceases spontaneously, almost, by the time the woman's attention is called to it; or, if she is erect and engaged in her household duties, it ceases upon her assuming the supine position, and is readily controlled by simple remedies. But this is a respite, only, as the hæmorrhage is almost certain to return with increased violence within a few days; at farthest, at the next menstrual period. Most generally it is not until near the close of gestation, or at the commencement of labor, that the hæmorrhage first makes it appearance—often at this time with a frightful discharge of blood, that may, in a few moments, place the patient in imminent peril, or even destroy her, without prompt and scientific treatment. As a rule, the nearer the woman is to her full time, the greater the hæmorrhage, which is greatest at the commencement of labor.

If there be uterine contraction; if labor be present, the hæmorrhage is increased during each pain by the separation of an additional portion of placenta by each uterine contraction. For this reason, the hæmorrhage received the name of "unavoidable," as uterine contractions were a necessity, and yet the immediate cause of additional separation of placenta and increased discharge. In noting carefully the hæmorrhage in these cases, I am satisfied that Legroux, Playfair and Barnes are incorrect in supposing the hæmorrhage is not greater, but really less, during a labor pain, the discharge, they think, being greater because the accumulated blood is discharged at this time. It is true we have clots discharged at the beginning of each pain, the accumulation during the interval, but most of the blood discharged during the pain is bright florid blood, that has just escaped, and is then escaping from the uterine sinuses. The causes for this are obvious; for, while uterine contractions, by condensing uterine tissue, do lessen the hæmorrhage in this and every form of uterine hæmorrhage, yet each pain or contraction, at its inception, separates an additional portion of placenta, laying bare additional uterine sinuses that must be closed, not alone by uterine contraction, but by these lessening the supply

of blood, slacking the current of circulation, giving time for coagulation, for thromboses to form, as it is not only by constricting the mouths of uterine sinuses that the hæmorrhage is checked, and the woman prevented from bleeding to death, even in natural labor, but also by the formation of thrombi, caused or promoted by uterine contraction, angulating the tortuous arteries of the uterus. During the time intervening between the separation of additional placenta and the formation of thrombi, there is increased uterine hæmorrhage, so that this increased hæmorrhage during a pain is actual, and not apparent only, as supposed by Legroux, Barnes and Playfair.

Called to a case of hæmorrhage during the latter months of pregnancy, a vaginal examination is absolutely necessary, and no feeling of delicacy upon the part of patient or accoucheur, nor fear of increasing the discharge by removing or breaking up clots, would justify us in neglecting it. Upon a vaginal examination, the diagnosis is seldom difficult or doubtful. If the os be sufficiently dilated to admit the finger, we will feel the placenta, either centrally or its margin inserted over the os, instead of the smooth membranes. If the finger cannot be inserted, the soft, boggy feel of the lower segment of the uterus, with the absence of the presenting part of the child, will readily determine the nature of the case.

Source of Hæmorrhage: From what has been already said, when considering the symptoms, this has been indicated, and it has always appeared to us one of the strangest things in obstetrical writing that there should be any doubt or difference of opinion upon this subject. It was pointed out by the early writers, and yet so slow do we learn, and with such tenacity do we cling to error, especially if associated with a great name; and so loose are the expressions of obstetrical authors, that we are even yet groping at noonday for what we could scarcely fail to see at midnight. In one of the latest, as also one of the best, works on midwifery (Playfair), it is stated that "it is pretty generally admitted by authorities that the immediate source of the hæmorrhage is the lacerated utero-placental vessels.

Now this is scarcely a fair statement of the case by this candid, worthy and usually correct author, as he is aware that the very existence of these utero-placental blood-vessels,—other than a few small vessels intended only for the nutrient wants of an advectitious organ, the placenta,—has been denied by many of the most distinguished men in the profession,

such as Drs. Knox, Madge, Monro, Meigs, Velpeau, Robin, Hodge, and others, while very few have thought they were able to verify the anatomical views of Wm. Hunter, whose injections of placenta through uterine arteries were thought to prove the existence of these vessels. Dr. Dalton's mythical diagram of these vessels would demonstrate the existence and importance of these vessels did they really exist otherwise than in the imagination of the author. Dr. Dalton is an ingenious and honest investigator, but in this, we think it not improbable, he has deceived himself. If this condition, figured in his diagram, really existed, why did he not, as suggested by Dr. Read, "make assurance doubly sure by forcing a more substantial and palpable substance than air along these vessels?"

The utterly untenable views of Prof. J. Y. Simpson that the blood in these cases came from the separated portion of the placenta—though never accepted by the profession—might again be revived with better chance of success if Dr. Dalton's placental anatomy could be established; as nothing is easier than to see how a woman might bleed to death from a partial separation of one of these placental sinuses, fed by one of his arteries. But is this the case? We have hæmorrhages from the placenta, but, as is well known, it is then the child that perishes; whereas in the hæmorrhages of placenta prævia, it is the mother that bleeds to death. The blood in the placenta, as is well known, belongs to the child, was manufactured by the child, never was, and never becomes, a part of the mother's blood.

It would then have been more consonant with the present state of medical views, had Dr. Playfair said, the source of hæmorrhage in this and all other uterine hæmorrhages caused by separation of the placenta was from the uterine sinuses, as all authors, differing as they may about the formation and connection of these sinuses, are agreed that the blood is poured out from them.

These sinuses are uterine veins enormously enlarged at placental site, and formed obliquely between, out of the muscular walls and mucous tissue of the uterus, laid bare by the separation of the placenta, opened up, uncovered by the removal of the epichorian, the *decidua vera*, that portion of the mucous membrane of the uterus which forms the maternal portion of the placenta, (Mathew Duncan to the contrary, notwithstanding), and against which, into which, chorion villi grow and gain their relation with maternal structure, in this and every

other uterine attachment of the ovum. Dr. Simpson's views as to the source of hæmorrhage in these cases, incorrect as they were, had at least this plausible excuse, that after the complete separation of the placenta the hæmorrhage generally ceased, and this, whether the separation was produced by nature or art. With this observation a rule of practice was self-suggested to artificially separate the entire placenta.

Dr. Barnes has promulgated another theory as to the source and cause of hæmorrhage in these cases, equally at fault with Simpson's, but entirely wanting in the plausibility of Simpson's, not suggestive of any rule of practice and unsupported by a single fact, and yet, by mere dint of reasserting it, has forced it into credit with some who ought to know better.

Now, Dr. Barnes, though an honest, earnest and ardent worker, and a gentleman of much learning and ability, is never so much like himself as when astride a hobby, and is seldom found wanting one, and here, in despite of all known facts to the contrary, after relating (truly) that the hæmorrhage is caused by want of correspondence in development between uterine tissues and placenta, reverses the natural order of things by supposing the development of placenta is in excess of placental site of uterus, whereby the placental rootlets, cotyledons, in their reachings, longings, for the beyond, drag other cotyledons after them, thus detaching placenta from uterine tissue.

Now, this fanciful theory enforced with so much rhetoric but unsupported by a single fact, is abundantly refuted in the fact that placental growth is most active, is nearly or quite completed, during the first six months, before which time hæmorrhage is rarely present, and when so is most generally comparitively unimportant; while during the last three months of gestation, at which time the placenta has attained its almost full size, and is certainly no longer engaged in the unprofitable task of longing for the beyond, and sending out additional cotyledons, that hæmorrhages are most common, most violent and dangerous, which places this theory in the position of being most potent in results, when the producing causes are least so.

Jacquemier, who is indorsed by Cazeau, gave the true theory of bleeding in *placenta prævia*; in referring it to the well known fact that during the first six months, the superior portion, or corpus uteri, is alone developed, while during the last three months, the development of the uterus is at the expense of the lower segment and neck, that during the time the uterine

development concerns its corpus, the placenta obtains almost its entire growth, while during the last three months, when the lower segment and neck are undergoing most rapid changes, the placental growth is least, necessitating separation and hæmorrhage.

We have seen many objections to these views of Jacquemier and Cazeau by authors who have theories of their own to promulgate, but none that we consider valid. Playfair objects to it, "that there is no evidence to show that the lower segment of the uterus does expand more in proportion than the upper, during the latter months of pregnancy." We believe there is positive demonstration of the fact, confirmed by almost all authorities. During the first six months, the growth, expansion of the uterus being of the body and fundus, the cervical portion remaining intact, the uterus reaching to the umbilicus is a spheroid, while in the last three months the lower segment and cervix undergo rapid and most important changes, whereby the entire organ becomes ovoid. These changes are produced by the circular fibres of the cervix being unraveled, drawn into the vortex of uterine development, so that in the last two weeks of gestation, or at the beginning of labor, the cervix is entirely obliterated, and this corresponds, as is well known, with the time at which the hæmorrhage is most common, most violent. The area over which the placenta is attached being greatly extended, while the placenta, having attained almost its full growth, loses its correspondence with uterine site, and as it cannot be stretched, a separation of its maternal portion, *decidua vera*, from uterine tissue is necessitated, thereby laying bare uterine sinuses, and rendering hæmorrhage, in most cases, unavoidable. This increased development of the lower segment of the uterus during the latter periods of pregnancy, which Playfair thinks, without proof, is admitted, even by Barnes, who, mounted upon "my theory," rides a Gilpin race, in which, like that illustrious hero, he gets farther than he intended, yet alights with the lower segment of the uterus rapidly enlarging.

It is true the older authors, and some later, who should have known better, as Tyler Smith, mistook the manner of the changes in the lower segment of the uterus, supposing it was by an opening or stretching of the internal os, whereby a gradually enlarging cone was produced by the enlarging internal os, until the neck was entirely obliterated.

It is this view that Barnes is endeavoring to refute, and does so, with none the less zeal that no one believed it. Cazeau had long since refuted it, and pushed his views too far, when he supposes the size and shape of the cervix undergoes little or no change until the last two weeks of gestation, and that the supposed shortening is only an illusion, and Mathews Duncan, who sounds the key-note in this, would draw entirely too much upon our credulity, when he would have us believe that the cervix retains its original length until labor sets in. And while it does not concern the views we have been maintaining, the enlargement of the lower segment of the uterus during the latter months of pregnancy, with which the cervix proper need have nothing to do, we are satisfied that the shortening of the cervix is not apparent only, an illusion produced by its softening in pregnancy, but is real, absolute.

This rapid development of the lower segment of the uterus in the latter months of pregnancy, by which a separation of placenta, in placenta prævia, is produced, causing hæmorrhage, finds additional proof in the fact that mal-presentations, so frequent in premature labors, are reduced to a minimum at term, as a fœtus that finds equal adaptation, accommodation, in any position in a spheroid, is forced to present such diameters as are best adapted to the form of an ovoid. This eternal fitness of things, rapid growth of upper portion of uterus with corresponding rapid growth of placenta, during the first six months, with rapid increase of lower segment of uterus, with stationary condition of placenta during the last months of gestation, in normal location of placenta, secures the well-being of mother and child, and is comparatively unimportant in placenta prævia during the first, but fearfully dangerous in the last period of gestation.

Prognosis: This, under the treatment heretofore pursued, has been, as we might readily suppose, in so grave a malady, truly frightful—but not so fatal as given in the tables of Churchill or Simpson. In 1,005 cases collected by Dr. Read, more than 200 mothers perished, or, one in four and one-half of the mothers, and about half of the children were lost.

In Dr. Barnes' practice, the mortality was greatly less, only one mother in eleven having perished, and as three of these were from causes equally potent in other labors, and not necessarily connected with the placenta prævia, the deaths from this cause were only one in twenty-three cases. But it may be hoped that we

have now attained a position in the treatment of these cases, where it is safe to predict that even this improved table of Dr. Barnes is fearful compared with the future; if indeed, the time has not arrived when it is scarcely excusable to let a woman lie merely because she has placenta prævia.

Treatment: Observing, truly, that after the appearance of hæmorrhage in placenta prævia there was danger of its continuing or returning as long as the woman was pregnant; that no reliance could be placed in precautionary or conservative treatment, as it was only after the uterus was emptied of its contents that the hæmorrhage ceased without fear of its returning, the older authors established an iron rule, which is given by Denman, who says: "It is a practice established by high and multiplied authority, and sanctioned by success, to deliver women by art in all cases of dangerous hæmorrhage, without confiding in the resources of the constitution." Subsequent ages have but confirmed the practice stated by Denman, and the improvements have been, not to evade it, but in the manner of its performance, as the only safety to the woman, as it was then, is now, to empty the uterus.

In all cases, then, of hæmorrhage, when the cause is ascertained to be placenta prævia, whether in the sixth or ninth month, or at term, the uterus must be emptied, as no reliance can be placed in position on a hard mattress, cold, acidulated drinks, opium, sugar of lead, cold applied to the vulna, plugging the vagina, etc., farther than they may be used as immediate expedients, looking to the speedy delivery of the woman, or promotive of this end; and the physician who would trust his patient to these, with the view of prolonging gestation, is but trifling in the presence of a fearful danger.

That we may the better appreciate our certain, safe and speedy manner of terminating pregnancy, let us glance at the steps by which it has been attained, through the labors of great and good men, whose highest ambition was to improve their profession in the saving of human life and suffering.

Guillemeau, the pupil of Ambrose Pare, following the teachings of his great master, advised delivery by the feet in all cases of dangerous hæmorrhage. His directions were to wait, if possible, until the mouth of the womb was *dilated* or *dilatable;* if this was not possible, on account of the dangerous character of the hæmorrhage—a condition, unfortunately, frequently present

—as women will not seldom die before the os is dilated or dilatable, then the hand was to be forcibly introduced into the womb, the feet seized, and delivery accomplished *fas et nefas.*" This was termed the *accouchement forcé*, and when Denman speaks of delivering the woman by art in these cases, this is the manner in which he expects it to be accomplished. To empty the uterus was then, as it is now, the imperious necessity, often admitting no delay—and this with the *then* state of the obstetrical art, was the only means of its accomplishment. But so fearful was the mortality, that many, appalled at the result, preferred, and even advised, in certain cases, to let nature kill the patient, rather than to certainly destroy her by art. Of twenty-five women thus delivered—collected by Simpson—twenty-one perished. But so persistent is error, that this fatal practice continued long after other and safer means of accomplishing the end had been practiced and taught—even down to our own day. Dr. Meigs recommends it, though fully aware that another and safer practice had long been taught—not from any indifference to human life, for in this he had a most conscientious regard; possibly, from his confidence in Denman.

So early an author as Mauriceau, followed by Clement, and finally brought prominently before the profession by Clement's great pupil, Puzos, taught that rupture of the membranes frequently arrested the hæmorrhage, and prevented the necessity of forcing the hand though an undilatable os. Thus was added another resource, invaluable in many cases, in the treatment of placenta prævia. It is not, however, a panacea, and, as stated by Barnes—who, we regret to see, is endorsed by Playfair—"the first thing to be done in all cases of flooding, sufficient to cause anxiety, before labor." For though, as had been long taught, valuable in many cases in arresting the hæmorrhage and hastening delivery, and in some the indispensible and only thing to do, in many others there is much else to be done before the membranes are ruptured; while it is not by any means necessary that they be ruptured at all by art, in every case. Rupture of the membranes is not then *the* resource in all cases, but one of our resources in certain cases. The exclusive views of Barnes and Playfair in this are, we think, but little better than that which they would depricate "to forcibly introduce the hand, in all cases bring down the feet and terminate the labor *fas et nefas.*"

The hæmostatic properties of ergot, by diminishing the size of the capillaries, renders it valuable in most forms of hæmor-

rhage, but its well known property of increasing uterine contractions, thereby condensing uterine tissues, renders it especially valuable in uterine hæmorrhages, and the cases of flooding are rare in which it is not of great value, and in not a few it is indispensible; it is often a valuable aid in the management of these cases.

Another resource is the tampon, plugging the vagina, recommended by Dewees, Capuron, Burns, Duges, Gardin, Ramsbotham, Hodge and others, among them Meigs, who, with strange inconsistency, while loudly berating it, recommends Braun's Colpurynter, which is only a mode of plugging the vagina. This constitutes an invaluable resource, and often sufficient of itself to arrest the hæmorrhage and hasten the labor to a fortunate termination. The objections to its use were, that it did not prevent the blood from escaping externally, but this is hardly an objection now, as we can so plug the vagina as to absolutely prevent the external flow. Another objection was, that though it might pre vent the blood escaping externally, it endangered its accumulating in the womb, whereby the woman might die from occult hæmorrhage. This is a possibility only after rupture of the membranes, at which time it is hardly indicated.

It had often been observed that in cases where the placenta was entirely separated by nature, and expelled before the birth of the child, or when it was artificially separated through the ignorance of the midwife, or by the skilled physician, the better to enable him to introduce the hand and remove the child, the hæmorrhage was greatly lessened or entirely ceased. Many such cases had been reported by Portal, Mauriceau, Smellie, Collins, Merriman, Ramsbotham, Baudeloque, and others; in some of these cases the child followed immediately after the placenta; in such cases the cessation of the hæmorrhage was readily accounted for, emptying the uterus with uterine contraction, condensing uterine tissues; in others, the child was not born for many hours or days after the placental expulsion, and yet the hæmorrhage ceased alike in both cases. Sir James Simpson sums up 142 cases in which this condition existed, in which there were only ten mothers lost, or one in fourteen, against one in three, where this condition was not present, or twenty-one out of twenty-five cases where the hand had been forcibly introduced into the uterus through an undilated and undilatable os—the *accouchement forcé*.

Reasoning upon these cases of previous expulsion of the placenta with cessation of the hæmorrhage, Rawlins concluded that the blood source in placenta prævia was the separated portion of the placenta; this view was adopted by Hamilton, Wood, Radford and Simpson, and from this theory, false as it was, Simpson drew correct rules of practice; that to arrest the hæmorrhage in certain otherwise unmanageable cases, the afterbirth should be entirely separated and removed before the child. Thus was added another resource in the management of these cases.

Dr. Barnes strongly objects to this recommendation of Simpson's; that it is impracticable; cannot be done in the manner in which Simpson says it can and should be done. But things that such men as Bradford, Simpson, Waller and many others of high authority assure us they have repeatedly performed, cannot be considered impossible of performance. He reasons better when he assures us the entire separation of the placenta is not necessary; its separation from the entire lower segment of the uterus, the cervical zone, being all that is required to arrest the hæmorrhage. If this be true, and it doubtless is in many cases (though not with the exclusiveness, nor for the reasons given, and as it may be much more readily performed), we are indebted to Dr. Barnes for its limitation, and therefore more general applicability, by which another resource is added to our treatment of these cases.

Then we have the plugging and distention of the os uteri by sponge and laminara tents, or water bags, a most valuable resource in many cases, and indispensible in not a few.

Modern chemistry has furnished us with another remedy of great value, in the solution of the persulphate of iron, by which we may conduct some cases to a favorable issue that would otherwise be unmanagable.

With all these resources placed at our disposal, sufficent, perhaps, to meet every emergency, as varied and urgent as are these in placenta prævia, let us accept conscientiously the iron rule, to empty the uterus in every case of placenta prævia where the hæmorrhage is sufficient to cause anxiety, whether the pregnancy is in the sixth or ninth month, or at term; and in no case attempt to protract gestation farther than may be necessitated by the safe use of the means in accomplishing this result, or until in cases of great exhaustion from previous hæmorrhage we have time to rally the patient. In accepting this rule so emphatically stated by Denman we differ with him only in the

manner of its performance. But the *only*, here is everything, embracing all the difference between life and death, all the difference between killing our patient and delivering her by safe and easy methods, through which the chances of her preservation are enhanced at every stage.

In a case of urgent hæmorrhage previous to the ninth month, upon a vaginal examination we may find the cervix of considerable length, the os high up in the hollow of the sacrum, reached with difficulty, and not at all dilated, no labor pains are, or have been, present; here Barnes' and Playfair's rule to puncture the membranes as the first thing to be done would be exceedingly difficult of safe accomplishment. And were it ever so easy, it should not be done, as only mischief would likely result from it, as the womb is not prepared for labor, and taken by surprise might not respond to the wishes of the operator, and even if it did, hours would elapse before the neck was obliterated and the os dilated sufficient to admit the finger, during which time additional partial separations of placenta would increase the hæmorrhage, or, if as first supposed, uterine contraction did not come on, and, to arrest the flow, we were compelled to resort to a plug of any kind, the external flow only might be arrested, the blood taking the place of the escaped water, the woman might bleed to death with internal hæmorrhage. We would not then rupture the membranes in this but tampon the vagina. For this purpose the patient should, without any exertion on her part, be placed on her left side across the bed, with her hips near its edge, introduce a Sims' speculum, sponge out the blood from the vagina and with a long strip of cotton or linen cloth that has been saturated with vinegar, pack the vagina, first plugging the mouth of the uterus with the end of the strip twisted to a point for this purpose, or packed within the os and cervix with a uterine sound, then double the cloth backward and forward until the vagina is quite filled, thoroughly packed, leave the end of the strip hanging out of the vulva to facilitate its partial, or complete, removal. If this has been carefully done the hæmorrhage is necessarily arrested, and time given to rally the patient if she be much exhausted. For this purpose we may give her thirty or forty drops of laudanum, with brandy and beef tea. And then the presence of the tampon is provocative of uterine contractions which are very likely to set in within a few hours, when the tampon may be removed and

the largest size sponge tent that will be admitted should be dipped in carbolated glycerine and introduced in the cervix, or, instead, three or five or more laminaria tents; these should be held in place by a pledget of cotton saturated with glycerine. Of course there is no hæmorrhage now, and labor pains, if present, are greatly intensified, if absent, are sure to be induced, while the tents perform the double purpose of stopping the discharge and assisting, hastening, forcing the first stage of labor, dilatation of the os. If all goes well, as it most likely will, the tents may be permitted to remain several hours, or until labor pains are urgent, when they may be removed, two fingers introduced into the uterus, and swept around, separating the placenta from the lower segment, and the membranes ruptured at any point when the fingers reach the placental margin. At this time the presentation of the fœtus should be ascertained and if untoward corrected by bringing down the head or a foot. This can nearly always be done at this time by the bipolar method. Give now ʒi. Squibb's fluid ext. ergot, and if there is no hæmorrhage and the pains urgent, we may trust to nature, carefully watching the case. If the hæmorrhage continues, or returns, for it is well to know that while this will most probably be arrested by the artificial dilatation of the os, the partial separation of the placenta and rupture of the membrane, yet it may not be, if still present then and the os be sufficiently dilated or dilatable, we may proceed to extract the child, with the forceps if the head is presenting, if any other presentation by the feet. In either case using only so much *vis a fronte* as may be necessary to suppliment the deficient *vis a tergo*, being careful to have the contracted uterus follow down the retreating fœtus, and this, more especially, if there be signs of failing strength, exhaustion, as evidenced by a small, frequent pulse, paleness, etc. The placenta most generally follows immediately, a compress should be carefully adjusted, and laudanum, brandy and beef tea administered if necessary, and the patient watched until fully recovered from any unusual depression.

If in this case the hæmorrhage had been urgent but had ceased at the time of our arrival, we may commence with the tents. It may be asked, "why not do so in the first place?" We most likely may not have them with us, and their adjustment requires time, meanwhile the woman is bleeding, to stop this and husband her strength, we resort to the tampon as an

immediate expedient, always at hand, and can be used to certainly arrest the discharge, while we are preparing for more efficient measures, should such be necessary.

Suppose the patient in the ninth month, or at term, the hæmorrhage is alarming, as it is most apt to be at this time, and upon our arrival is still present, the woman, though not greatly exhausted, shows signs of exhaustion; upon a vaginal examination we find the os partially dilated, admitting readily two fingers, but rigid and undilatable to an extent to admit the hand; pains are present, but feeble; shall we resort to the *accouchement forcé* by forcibly dilating it with the fingers, introducing the hand, turning and delivering? By no means, for while we might do this, perhaps, without any great delay or difficulty, such proceedure would be extremely hazardous, would most likely destroy the life we were endeavoring to save, as the os is extremely intolerant of forcible distention in placenta prævia, is rendered exceedingly friable and likely to tear by the abnormal implantation of the placenta, and then a bruise or tear that would be of small moment when the placenta was at its normal site would be fatal now; hecatombs of women have perished for want of observance of this fact, and then there is no necessity for doing so, as we have other and safer means of accomplishing the end aimed at. In this case, as uterine contractions are present, we need not fear to rupture the membranes. Introduce two fingers into the uterus, sweep them around between the uterus and placenta, separating this as far as the fingers will reach and tear open the membranes at any point we can reach them; if we fail to reach the placental margin at any point, introduce a uterine sound along the anterior aspect of the uterus, until it passes the placenta, turn it over with the convex surface to the uterus when the membranes will be ruptured by the point; with gentle movement enlarge the opening, and give ʒi. fluid ext. ergot. As the waters escape, the increased uterine contractions drive down the presenting part against the placenta when it can be readily reached by the fingers; if this be faulty it should, if possible, be now corrected by the bipolar method, and the case left to nature; most carefully watching it; most probable all will go well. Should anything happen to render a more speedy delivery desirable, introduce the largest size Barnes' water-bag dilators, and gently dilate the os, remove it, and if the head present apply the forceps, if they

can be made to seize the head, a thing not always practicable on account of presence of the after-birth, in which case introduce the hand, bring down a foot, and extract the child, using only so much force and expedition as may be necessary.

Now suppose, upon examination, the os was found dilated, or readily dilatable, the pains weak and the hæmorrhage urgent. Dr. Yarnell, an experienced and skillful accoucheur, told me that he had a few days since just such a case; he was summoned in haste to see a patient, who had lost a large amount of blood and was still bleeding. She was at term, labor pains had been urgent, but had become feeble from loss of blood, and though symptoms of exhaustion were manifest, this was by no means great; the placenta was found attached centrally, and the os well dilated and readily dilatable; she had had many children and with the relaxation produced by the bleeding, the hand was introduced without difficulty, he immediately introduced the hand into the womb; separated the placenta, tore open the membranes, seized and brought down a foot, and gently, firmly, slowly extracted the child, having an assistant make compression on the womb, after the hips passed the vulva, a ʒi. of ergot was given, the placenta immediately followed the child, a compress and bandage were firmly applied. The child was saved, and the woman recovered without a bad symptom. Well, this is just what ought to be done in such cases. No time should be lost whereby the woman falls into great exhaustion, but she should be delivered immediately, just as this woman was delivered. The treatment of this case admits of no improvement.

Again, the woman may be at the termination of gestation, has had previous hæmorrrhages which have impaired her strength, and the accession of labor is announced by a fearful gush of blood which has reduced her to almost the last extremity; she has fainted, and though rallied from this, she is almost pulseless; her extremities are cold, lips blanched, and respiration labored, the hæmorrhage has ceased, and she is slowly rallying; upon examination the os is found fully dilated, or readily dilatable, the almost death grasp has relaxed the system, and the uterus offers no resistance to the introduction of the hand. Nature's guards are withdrawn from their post by life's ebbing current; under such circumstances nothing is easier than to introduce the hand, turn and deliver, and knowing that the woman is never safe, or at least that we cannot be

sure of her safety, from a return of the hæmorrhage until the uterus is empty; and remembering the obstetrical aphorism, "never to let a woman die undelivered," we are almost irresistably driven to do so; but to do this with her present extreme exhaustion is almost certain death. What then is to be done? We should first give the patient time to rally, assist her to do so; to do this give her forty to sixty drops of laudanum in brandy, lower the head by removing the pillows and bolster, elevate her hips by placing blocks under the feet of the bedposts, or these may be lifted into chairs, and as soon as reaction is established, rupture the membranes and give a dose of ergot. We have in this case given no directions for separating the placenta, and would not attempt to do so, as this has most probably been accomplished by the advance of the labor, which would soon have terminated happily, without further loss of blood, but the hæmorrhage had outrun it, had paralyzed muscular fibre, thereby arresting uterine contractions, and then by unnecessarily sweeping the finger around, between separated placenta and uterus, we would break up the clots that plug up the patent uterine sinuses, and provoke bleeding, which, if undisturbed, may "hold the fort," until the woman has so far rallied for returning uterine contractions to rapidly complete the delivery.

If, however, the woman was bleeding at this time it would indicate the necessity of sweeping the finger around the lower segment of the uterus, previous to puncturing the membranes; during the discharge of the water, firm pressure should be made over the uterus, so as to keep up as much as possible the "stimulus of distention." After the woman has rallied and the water discharged, it is almost positively certain, in the case under consideration, that the presenting part (if this be the head or breech, and, if any other, it should be corrected by the bipolar method, or external manipulation, at the time of rupturing the membranes), has been driven down into the mouth of the womb so compressing the placenta as to prevent any further loss of blood, were this otherwise likely to occur. We may now leave the further progress of labor to nature, carefully watching, and giving such assistance as may be necessary only, and this will, most likely, be confined to giving stimulants and nourishment to our patient, whereby the womb will be enabled to take care of itself.

Now we have been so positive in our advice not to turn and deliver under this condition, and so many women have perished unnecessarily from being hastily delivered during great exhaustion, that it may be well to give cases and authority in support of our opinions.

Murphy (Principles and Practice of Midwifery) says: "Let us now direct your attention to a case in which the patient is suffering all the worst consequences of flooding, if you were at once to turn the child and deliver, *the fate of the patient would be sealed.*" Dr. Rigby justly observes that "the success of turning depends upon its being done before the patient has lost too much blood;" and, says Murphy, "the fatal effects of performing it too late, when the patient is extremely exhausted, is best understood from a few examples:" Gifford relates a case of this kind on which he remarks, 'although I dispatched this delivery in a few minutes, and without the loss of any quantity at that instant, yet the poor woman, from the preceeding excessive loss of blood which had occasioned convulsions and great loss of strength and spirits, died in half an hour after she was delivered.' Smellie's case is quoted in which he delivered the child by turning, upon which the flooding stopped, but she was so weak that she expired in a few minutes. Two cases are given from Rigby in which there was extreme exhaustion, both were delivered by turning, one died in six hours, the other in half an hour, and Rigby remarks, 'so far from turning having been prematurely done I am convinced its want of success is owing solely to its being performed too late.' Says Murphy, "This list might very easily be lengthened, the records of practice afford numerous examples of the fatal effect of turning in extreme exhaustion.

Prof. Thomas says: "Should dilatation of the os have taken place, and the patient be exhausted from sanguineous loss, the practice of rapid artificial delivery will not rarely be followed by a fatal prostration." Playfair says: "Much harm has been done by turning when the os is imperfectly dilated, or when the patient was so much exhausted by previous hæmorrhage as to be unable to bear the shock of the operation. If she has a small, feeble and thread-like pulse, turning is certainly inapplicable, unless all other methods of controling the hæmorrhage have failed and even then it would be well to attempt to rally the patient from her exhausted condition before the operation is commenced."

Ramsbotham gives both the fact and the reason. He says: "We may, perhaps, find her faint and cold and gasping, the uterus quite inactive, with its mouth widely open, and possessing that degree of unresisting flabbiness which, to an experienced hand, is indicative of urgent danger; *under this condition delivery would indeed be easy, but it would at the same time be followed by almost certain death*, for, if we empty the uterus under syncope or deep and long-continued fainting, we cannot reasonably suppose it will take upon itself that degree of action necessary to close its vessels and insure permanent safety; our indication here would be to arouse the patient, to bring her to a certain point—stimulants are absolutely called for. Under such circumstances, although it is a maxim in obstetrics never to allow a patient to die undelivered, *it should also be another maxim never to empty the uterus during syncope*, for it is not the mere extraction of the child, but to leave the woman in the best condition for recovery; but another danger (besides the woman dying of hæmorrhage) must be added. The sudden emptying the uterus of the whole of its contents nearly together, and that, too, when the constitution, weakened by hæmorrhage, is easily affected by any depressing action. We well know the effects of suddenly evacuating the water in ascites, that the most hearty persons will sometimes fall into a state of syncope by the sudden removal of the pressure—the same condition exists when the pressure of the gravid uterus is removed by the evacuation of the liquor amnii and the extraction of the child at a time when the system is suffering from depressing causes, and we cannot wonder that collapse occurs as a consequence, even though the delivery be perfected with but slight additional loss of blood."

The quotations will doubtless be accepted as sufficient to justify—fortify—our urgent advice not to hastily empty the uterus during great exhaustion; let none forget or disregard the admonition, as the penalty for so doing is *death*. Well, what should be done in addition to what has been recommended in such cases, as in those more desperate still, where we cannot, dare not do even this? To answer this question, we will suppose a case in the last extremity. The woman has had frequent hæmorrhages, and falls in labor at full term with a fearful hæmorrhage, faints, rallies, faints again, and is found by the accoucheur almost *in articulo mortis*, pulseless, labored respiration, surface cold,

eyes sunken, features pinched, lips blanched, and, without an ounce of blood to lose and live, is still bleeding. To deliver her is certain death—not to do so is to let her die—can anything be more appalling? and yet this woman should not die—shall not die. To show what may be done, even here, we will give a case.

Some three years since we were called in consultation with Dr. E. Montgomery, an able and experienced accoucheur, and a gentleman who reflects equal honor upon his profession and his race, to see Mrs. ——, in her last confinement. She was seized with flooding at the seventh month, which ceased, to appear with increased violence at the eighth month. This was controlled, when it appeared once or twice during the ninth month, and at term the beginning of labor was announced with a frightful hæmorrhage. The woman being ensanguined by previous floodings, was illy able to bear this frightful drain upon the exhausted treasury of life, and soon fainted; and when seen was pulseless, the surface cool and the extremities cold to the knees and elbows, countenance blanched, lips white as the sheet upon which she lay, respiration labored, sighing—indeed, seemed to be moribund. A tampon had been introduced in the vagina, yet the hæmorrhage continued—a feeble stream of blood trickled over the nates, not in sufficient quantity to do mischief, had not the woman lost every ounce she could lose and live, the bed and clothing and person of the patient being saturated or stained with blood, that still oozed from a system drained to the last extremity. Labor pains, which had been present and urgent, had ceased; nature, exhausted, could no longer support the effort, and, paralysed, had paused almost amidst the stillness of death. Syncope, repeated and prolonged syncope, was only partially recovered from. In almost the very hour and article of death, our patient cast no imploring look upon her medical attendants. She stood upon the border land, where life or death were equally matters of indifference, and yet she was still bleeding! What was to be done? What could be done, in the presence of so many and such formidable dangers? With the death relaxing condition of the parts, nothing was easier than to introduce the hand, turn and deliver, and with the obstetrical maxim, "never to let a patient die undelivered," the temptation was to do so, and yet nothing was surer death. To empty the uterus in this condition was to shut the gates of hope against her—was to certainly kill her—and yet to kill or only

let her die seemed a matter of but little difference, as death appeared inevitable, was at hand. To let her alone was to let her die—quietly die—to remove the tampon, break up and remove the clots, separate the placenta and puncture the membranes was certain to increase the hæmorrhage, and by removing the stimulus of distention increase exhaustion and surely destroy the patient. Could anything be more desperate, more hopeless, and yet, with my Uncle Toby, we swore this woman should not die, and for this determination we claim no credit—deserve none—as we had not invented or discovered a single agent to deliver or secure her safety, but were indebted entirely to the labors of others. She was immediately given sixty drops of laudanum, with brandy and beef tea; the brandy and beef tea were repeated as often as she could be induced to swallow them, for she was semi-conscious only, and swallowed with difficulty; the head was lowered, and the hips elevated by raising the foot of the bedstead; and, having prepared a pint of the solution of the per-sulphate of iron—one part of iron to two parts water—and filled a Ferguson syringe with the solution, and having prepared several pieces of cotton by wetting in the solution and pressing them dry, we removed the tampon, passed the hand into the vagina, and two fingers into the widely dilated os uteri accompanied by the nozzle of the syringe, we rapidly swept them around between the placenta and uterus, not separating the placenta, for this was already separated from the entire lower segment of the uterus; but removing the clots from between the separated placenta and uterus; following the fingers with the syringe—Dr. Montgomery working it—continuing a constant stream of the styptic, which came in contact with the bleeding surface as fast as the fingers pressed away the clots; the syringe was removed, and instantly—my hand still in the vagina and the fingers in the uterus—a pledget of prepared cotton was carred into the uterus and spread over the placenta, packed between its separated surface and the uterus; over this another was placed, closing the os, and on this a tampon, saturated with glycerine, was placed, to hold everything in position. The margin of the placenta was no where reached, nor did we desire to do so, as the object was not to empty the uterus, but to entirely, absolutely, arrest the hæmorrhage until the woman had time to rally. There was no hæmorrhage during or after the operation—absolutely none—none was possible.

For the successful after-treatment the patient owes her life to the family physician, Dr. Montgomery, who remained constantly with her, administering nourishment and stimulants as occasion required. The bladder was kept empty with the catheter. This was on Sunday—during the day and night there was no accession of labor; the patient was too much exhausted for this; but, as there was no longer any loss of blood, the patient slowly rallied, until, by Monday morning, or twenty hours after the operation, labor set in, the plugs were expelled, followed by the mumified placenta, and this by the fœtus—dead, of course. The placenta was dried, mumified in every part, except from half an inch to an inch of the margin. The woman recovered, and is now living and hearty.

Now, we ask, would this woman have lived had Barnes' and Playfair's advice, to puncture the membranes as the first thing to be done in all cases, been carried into practice? Would not the removal of the stimulus of distention alone, in this case, have been quite sufficient to destroy the woman? And then, could she have survived labor, had this been induced by rupturing the membranes? To rupture the membranes was then not only not the first thing to be done, but was not to be done at all. The treatment here was novel, suggested by the extremity of the patient—and could any other treatment have saved the patient? But nothing more was necessary; and if this patient was saved, may we not hope the time has passed when any woman need die, merely because she has placenta prævia? Let us so hope.[1]

Stated Meeting, October 19, 1878. Dr. S. G. Moses, President, in the Chair.

Hydatiform Mole.—Dr. Boisliniere presented a specimen of the so-called Hydatiform Mole with the following remarks:

The specimen here shown was long supposed to consist of hydatids, and was called "Hydatiform Mole." A more careful examination has shown, however, that they were not, like true hydatids, closed sacs within one another, their arrangement being quite different; each saccule, either growing from one

For the discussion of this paper, see page 107.

another, or connected with the chorion by distinct pedicles, and therefore often described as a bunch of grapes or currants. When they escape unexpectedly, they are described by Gooch as a mass of "white currants floating in red currant juice."

It is now admitted that this is a cystic degeneration of the chorionic villi, commencing at an early period of pregnancy, before the placenta has commenced to form. It may begin later, after the atrophy of the greater part of the chorion villi, and is then limited to the placenta. The diseased villi become cystic and distended with fluid. A remarkable power of increase follows this degeneration; so that the mass discharged equals sometimes the size of a child's head, and fills a bucket, as happened in a case reported by the President of this society.

In the specimen here presented, the grape-like formation is apparent; but the vesicles are small, as pregnancy had not advanced beyond the third month.

The symptoms presented by the patient were those of early pregnancy. But an unusual increase of the uterine globe far beyond that of the period of the supposed impregnation, showed that something abnormal was going on. For about a week previous to the ejection of this mass, watery and sanguineous discharges had taken place, and were finally succeeded by an alarming hæmorrhage, causing fainting, absence of pulse at the wrist, etc., and requiring the most prompt measures.

After the mass was removed, no fœtus could be found. The destruction of the embryo is the rule in these cases, unless it turns out to be a case of twin pregnancy, in which the uterus, failing to expel the whole of the products of conception, has retained one of the embryos, perhaps in a double or in a bifid uterus, as has occasionally happened. Hence, caution should be exercised in the treatment of such cases, lest we destroy the living germ while removing the dead.

A medico-legal question may arise in connection with these cases, which always suppose pregnancy. Playfair remarks that true entozoa may form in the substance of the uterus, which, being expelled *per vaginam*, might be taken for the results of cystic disease; and, if it happened to the unmarried or to a widow, might give rise to groundless suspicions as to the patient's chastity. Hewitt has related one case, in which true hydatids, originally formed in the liver, had extended to the peritoneum, and were about to burst through the vagina at the

time of death. This occurred in an unmarried woman. One or two other examples of true hydatids forming in the uterus, are also recorded. A very interesting case is also related by Hewitt, in which undoubted acephalocysts were expelled from the uterus of a patient who ultimately recovered. A careful examination of the cyst and its contents would show their true nature, as the echinococci heads, with their characteristic hooklets, would be discoverable by the microscope. McClintock has pointed out that it is possible that unfounded suspicions might arise from the fact of a patient expelling a mass of hydatids long after impregnation. In the case of a widow, or woman living apart from her husband, serious mistakes might thus be made. He remarks that a so-called hydatiform mole may be retained in utero for many months or years, or a portion only may be expelled and the residue may throw out a fresh crop of vesicles, to be discharged on a future occasion.

Dr. S. G. Moses: I have seen but few such cases, one presenting an interesting history:

The lady became, as she supposed, pregnant, having all the ordinary early symptoms; at the end of three months she became exceedingly nervous, insisted that she had hydrophobia, and was not pregnant. No enlargement of the abdomen was apparent. Suddenly at the end of five months the abdomen increased rapidly in size, and at six months was enormous, far larger than ordinarily is seen at full term, but auscultation and palpation discovered no evidences of the existence of a fœtus. At this time labor pains approached, and vaginal examination, the os being dilated, revealed the same condition described by Dr. Boisliniere. A very large quantity, which filled an ordinary bucket, of these cysts which I scooped out with my hand, were delivered. There was no hæmorrhage of consequence after the evacuation of the uterus. There had been no previous abortions.

This patient was afterwards treated, while absent from home, for ulceration of the cervix. Nitrate of silver was used very frequently until she was pronounced cured, but upon her return I found her suffering from severe dysmenorrhœa caused by stenosis of the cervical canal, the result of contraction following the use of the escharotic. This was finally overcome, by dilating with tents, etc., to such a degree that she became pregnant, and again, at the end of three months, a train of nervous symptoms,

similar to those of the former conception, recurred. Development of the ovum seemed arrested, and at the eighth month, with great difficulty, she aborted of a mummified fœtus of about three months. Since then she has had two normal pregnancies and living children.

Annual Meeting, November 21, 1878. Dr. S. G. Moses, M. D., President in the Chair.

PLACENTA PRÆVIA.—Discussion of Dr. Maugh's paper, read at a previous meeting.

Dr. Ford.—In referring to the cause of the hæmorrhage in "Placenta Prævia," Dr. Maughs took the position that it was due to the overgrowth of the inferior zone of the uterus, compared with the growth of placenta.

This fact of the overgrowth of the inferior zone is not proven by any means. There are no well authenticated observations, nor theoretical considerations warranting our acceptance of that doctrine.

I have had the opportunity of seeing but two cases of placenta prævia in my life—one of them in consultation—but I have long held and expressed the view that these hæmorrhages were due to the contraction of the uterus; these contractions occur continually during gestation, and I have regarded them as a means of education of the uterine fibre; this contraction may become excessive, indicating an irritability that should be repressed. We must consider that the uterine fibre, and the nerves which supply it, grow together. And I have no doubt that the reflexive centers of the spinal chord, and probably of the gangleonic system likewise, which control the uterus, do, in a measure, take on hypertrophic development, not only in concomittance with the general increase of the nutritive exaltation, but as a special appliance, as a special formative energy during gestation. So that, as the uterine fibre grows, the number of its cells increases, new fibres arise, the nerve twigs also enlarge, the number of nerve centers commanding the uterus increase. Under these circumstances we have a store of excitability laid up. The growth of the uterus, then, during pregnancy must be

regarded, to some extent, as a period of rest—we may even say, a period of sleep, of growth and development.

The contractions that occur during this period leads to increased development, and tend ultimately to more perfect contraction at the time of labor.

Playfair, in speaking of the cause of hæmorrhage in placenta prævia alludes to the same thing.

These contractions have, I think, a direct effect upon the placenta, which is situated, in the cases we are considering, in the inferior zone of the uterus, and I regard, therefore, the cause of the hæmorrhage as a partial detachment of the placenta by these occasional contractions. I think, also, that these contractions are, to some extent, analagous to the causes which induce labor, ordinarily. All other explanations of that phenomena seem to have failed, except one, which applies, in the first place, to the ripeness of the uterine fibre and of the nervous ganglions which supply it; that is the fundamental and predisposing cause of labor, in my opinion; the uterine muscular fibre is ready for discharge, the force bearing upon the material is ready for dissolution, and the nervous chords commanding it are likewise ripe. That is the predisposing cause; but, in physiology, where we have a predisposing cause, we must likewise have an exciting cause. I have, for a long time, held the opinion, but, in the presence of gentlemen who are so familiar with this subject, I put it forth very modestly, that the immediate cause of parturition is the irritation of the inferior segment of the uterus, by the presence of the head, or some portion of the fœtal body, pressing upon the inferior zone; the inferior zone of the uterus is supplied with a very different set of nerves from that which supplies the fundus. The sympathetic system almost entirely supplies the fundus. The hypogastric plexuses the inferior portion of the inferior zone and the os internum. It is that portion, likewise, to which the sacral nerves are distributed.

I suppose that the exaltation of the inferior zone is propagated through the sacral nerves and through the hypogastric plexuses to the spinal chord, and is reflected back through the sympathetic system to the fundus. We have, also, to recollect, in those cases where the placenta is inserted into the inferior zone, the mere fact of this insertion renders that part of the uterus more excitable than any other portion of the organ; the vessels

are dilated, its vascularity is greater; the excitement consequent upon the flux of blood into the uterus, must produce a greater disposition toward nervous irritability than if the placenta was inserted near the fundus. So that the very mechanism by which contraction of the uterus is brought about is the cause of hæmorrhage, by expulsive force, directed against the placenta, and necessarily detaching and stretching it. In site the placenta, formed of cotyledons, is expanded and compressed, so that it occupies much more space than it presents when removed from the uterus. Nature designs that it should bear pressure; that its cotyledons may be approximated, but they cannot be separated without rupture of the frail placental tissue. If, then, with the placenta covering the os internum, the inferior zone be expanded by the force directed against it, the placenta must yield, or tear; as it cannot increase its area, there must be a separation of the placenta from the decidua upon which it is engrafted, and there must be some kind of hæmorrhage. That, I think, is the explanation, at any rate after the fifth month. Playfair endorses these views as to the cause of hæmorrhage.

Dr. Engelmann.—I think the most important feature is with regard to the treatment of these cases. They are cases in which the life of the mother is endangered, and that of the child lost. I have had three cases within the last two years, in only one of which the child was saved—the mother in every instance. The treatment was such as Dr. Maughs suggests. I relied mainly on the tampon. I generally have found tamponing imperfectly done. The tampon is commonly made either of cotton stuffed in, or handkerchiefs or bits of linen. I use balls of cotton, with a string attached to each, and stuff the vagina to its full capacity. It is impossible that the hæmorrhage should go on if the vagina is properly tamponed. Labor pains are also excited. The tampon is usually left in until it is forced out by severe pains, and then we can generally introduce the hand and deliver. I do not see the advantage of styptics. Barnes' dilators have succeeded in my hands in such a case. With regard to the cause of hæmorrhage, I think Dr. Ford covered mainly the causes, or, at least, the causes which excite labor, whether in placenta prævia or ordinary cases.

Dr. Ford.—It seems to me that the simple mechanism of labor is an explanation of the hæmorrhage—when we have a

case in which we have, as in every other case, preliminary pains which tend to loosen the membranes, as well as the placental tissue—then dilatation of the os, and, as that enlarges, it certainly must tear loose from the placenta, and leave raw surfaces on either side.

Dr. Boisliniere.—It has been said that the vicious implantation of the placenta may occur from a diseased condition of the uterine mucous membrane, preventing the formation of a complete decidua, so that the ovum only finds a lodgement at, or near the internal os, also in other instances to the fact that the long diameter of the uterus is transverse so that the ovum drops at once into the lower segment, this seems to be corroborated by the frequent coincidence of transverse fœtal presentations.

These cases may be divided into two classes, the favorable and the unfavorable; in the first the vertex presents and assists compression in opposition to the tampon; in the second the transverse position of the child deprives us of this advantage and the danger is greatly increased.

Recurrence of the accident is noticeable. Dr. Bauduy reported an instance of two pregnancies, both placenta prævia, the second resulting in death to both mother and child. I have attended a lady in four such accidents, and she had two besides, making six cases in the same person, the positions were always transverse, except one breach, and labor always between the seventh and eighth months.

I have had but few such cases and always use the tampon until such time as I can deliver readily. In case of excessive hæmorrhage without dilatation, such as Dr. Maughs described, I should resort to the injection of perchloride of iron, as recommended by him, but this would not be necassary in case the head presented, the tampon would be sufficient.

Rupturing the membranes before dilatation is secured is very bad practice; we lose the hydrostatic pressure of the amniotic fluid, and in case of inertia supply a cavity that may become filled with blood, we may have concealed hæmorrhage. For material I find sponge the best tampon, it absorbs the blood and forms coagula much better than cotton, which becomes hard. I adopt Hodge's plan, and place a sponge in the cervix. In case of a sensitive or contracted vagina soap the sponge, never grease it.

Under these circumstances especially, the cervix should be handled with extreme care, as laceration is not difficult to produce, and an additional cause of continued bleeding would result.

Dr. Coles.—There is one point in regard to the mechanism of the hæmorrhage which has not been settled to my satisfaction, and that is whether the partial dislodgement of the placenta takes place by virtue of the contraction on the one hand, or stretching on the other, of the uterine fibres. In other words, whether the placenta is more readily detached by compression, or by the stretching of its tissues, as suggested by Dr. Ford. Under ordinary circumstances, when the placenta is of normal implantation it will stand a considerable amount of either of these forces. So long as the uterus contains the fœtus it is ordinarily impossible for sufficient contraction to take place, even in a violent labor, to dislodge the placenta from the upper zone of the uterus. Since, however, there is no such mechanical obstruction to the lower segment, (it not being fully occupied, or distended, when the organ is at rest), the cervical portion, however inferior it may be in contractility, does absolutely, in the early stages of labor, or just prior to labor, contract more in proportion to its superficies than the fundus. And while the contraction of the latter segment forces the amniotic sack against the neck, thus tending forcibly to put it on the stretch, there is, at the same time, an active shortening of the cervix through the contraction of the longitudinal fibres. The effect of this is to shut off the escape of blood from the placenta through the uterine vessels, rendering it firmer, less compressible, and more susceptible of detachment. We know that it is through uterine contraction that the placenta is ordinarily detached *post partem.* There is good reason also to suppose that it is thus frequently partially detached during the earliest months of pregnancy; indeed, it is held by many high authorities, that abortion is frequently the result of placenta prævia, the miscarriage taking place before these changes have been wrought in the conformatfon of the uterus, to which allusion has just been made, at a time when we cannot fairly presume that the hæmorrhage is due to the forcible stretching of the cervical portion.

Dr. Barrett:—I would like to say a word in regard to one point that Dr. Coles has referred to, that is with regard to the frequency of placenta prævia, or rather the occurrence of hæmor-

rhage at different stages of gestation. Dr. Barnes says that placenta prævia is one of the most frequent causes of abortion, and he alleges also that that portion of the placenta which has been prematurely separated presents a different appearance from the rest of the surface, it is dessicated, hard and leathery from coagulation of blood in the placental vessels; and certainly, in two cases of placenta prævia which I have had the opportunity to observe, that portion of the placenta which was "prævia" presented this appearance. Since observing this statement in his works I have paid some attention to the observation of placentas in abortion, and I find that this appearance characterizes a large number of them, so that I am inclined to think that placenta prævia is frequently the cause of abortion.

So with regard to the contractility of the upper and lower segments of the uterus, I think there can be no doubt that the upper is the most actively contracted. I doubt very much whether the uterine fibres have much to do with dilating the os. I do not believe that they have, but that the dilation is effected almost entirely mechanically. In those cases where there are mal-positions, *e. g.* shoulder presentations, when the child does not wedge open the neck of the uterus, there is generally imperfect dilatation.

Dr. Ford:—It is possible that Dr. Coles has somewhat misconstrued my statements. I do not know that I said anything about the contractions of the inferior zone of the uterus with regard to the cause of hæmorrhage during placenta prævia; but all my remarks were especially designed to bear upon the fact of the dilatation, or expansion, of the inferior zone of the uterus thus passing in immediate contiguity with the os, not the os itself, but the parts of the uterus to which the placenta is attached, whether it be central or only marginal, that portion must be stretched by the hydrostatic pressure of the amniotic fluid, pressing the placenta, as it were from within, downwards, and so expanding the inferior zone, while the placenta itself cannot yield commensurately.

I have found cotton wick a most useful article for tamponing in any form of hæmorrhage. It may be saturated in medicaments and applied to any form of cavity to any amount, in a continuous piece, removal of the entire tampon being easily and sure accomplished by drawing upon the free end.

Dr. G. A. Moses:—I desire to call further attention to the probability that placenta prævia is more frequently a condition than is usually recognized, and is probably often the cause of early abortions. I am satisfied that I have seen several such instances, and think that most of the abortions, which are apparently causeless, and preceded by profuse hæmorrhage, will be found to be due to that condition.

As for tamponing, I consider sponge far the best material ordinarily at hand, it should, if possible, be passed into the cervix as a tent, it possesses a great advantage over cotton of expanding as it absorbs, while cotton contracts. Dilatation of the parts is thus favored to the utmost, while hæmorrhage is perfectly restrained.

Dr. Gehrung:— Styptics, such as the salts of iron, should be cautiously used under such circumstances. The child should be delivered after hæmorrhage has been arrested, and the corrugated, contracted vagina might be in danger of laceration if manual interference became necessary.

The President, Dr. S. G. Moses, then read the following

ANNUAL ADDRESS.

Gentlemen: This evening the St. Louis Obstetrical and Gynæcological Society completes the first year of its existence, and, I think, reviewing the work accomplished, we have reason to feel satisfied that much good has resulted. The meetings have been well attended, the various papers read, and the discussions thereon have been most creditable and instructive. Harmony and good feeling have characterized them all, and I do not hesitate to say, what I feel all present will endorse, that this society is a success, and that in time it will be among the first in the land for scientific and original discussions in our especial department of medicine.

I shall occupy only a few minutes in a hasty review of the papers read.

At the opening session, Dr. Gehrung read a paper on a new way of treating acute Cystitis, in which many valuable suggestions and original thoughts were given.

The second paper, by Dr. Barret, on "Intra-uterine Injections," was replete with results of treating, by this means, uterine hæmorrhages, both puerperal and non-puerperal. Perhaps

the most important use of this treatment was the thorough washing out of the uterine cavity, after giving free vent to menstrual accumulations; also to cleansing the puerperal uterus when there is reason to believe that retained matters may give rise to septicunia. The author very judiciously insists, in all intra-uterine injections, that the free return of the injected fluid should be fully assured by the patulous or expanded condition of the uterine cervical canal.

Dr. Boislinier's paper on "Sterility" was full of valuable information upon this most interesting subject, giving the ample experience and tact of the learned and expert author, enumerating the several causes and the best modes of treatment of this important condition.

Next followed the detail of an interesting case by Dr. Feehan—an abnormal development of the gravid uterus, described as posterior obliquity.

Dr. George Engelmann's paper upon "Hystero-Psychosis" was especially interesting, as showing the result of cases of hystero-epilepsy, treated by removing the diseased condition of the uterus; in both cases related, the rapid improvement and eventual cure of the epileptiform attacks, proved the importance of examining the uterus and curing any lesions of that organ, in such cases. He also related three cases of extirpation of the ovaries (Battey's operation), for dysmenorrhœa, all unfortunately resulting in death. We must give credit to the operator for his candid avowal of the unfortunate results, and we may hope that this operation will yet succeed in relieving such cases as depend upon abnormalities occurring in these organs, producing such suffering as to render life a burden.

Dr. Ford related several cases of amputation of the cervix by the Galvano Cautery, most interesting, as showing the utility of this mode of operating in certain cases, especially of malignant disease—insisting upon the importance of not allowing the wire to arrive at a white heat; the paper and description thereon were deeply interesting.

At the next meeting Dr. Gehrung read a valuable paper upon "Improved Vaginal Touch," which evidenced an intimate knowledge of the anatomical relations of the parts, and gave useful information upon this important means of diagnosis.

At our next meeting Dr. Maughs read a most learned and exhaustive treatise upon "Placenta Prævia," laying much stress

upon the importance of styptic injections in the treatment of certain cases of this most formidable accident. The paper is full of valuable information, and cannot fail to impress its readers with the erudition and originality of its eminent author.

At the last meeting of the society Dr. G. A. Moses read a treatise upon "Eclampia Puerperalis." Its original character and evident careful observation and thorough investigation of the subject, I hope I may be permitted to say, characterized its author as a laborious student.

The discussions upon these papers have been full and important, and, I trust, will be fully and carefully published, proving to the world that, even in the Far West, we have men devoting their lives and energies to the cultivation of medical science.

This evening, gentlemen, closes my term of office as President of this society. Allow me to thank you for your many kindnesses. In retiring, I hope you will not take amiss a suggestion or two with regard to certain changes in the order of business. It seems to me the papers read should be discussed on the same evening of their presentation, when all the points are fresh in the minds of the members; also, as it is important that the proceedings of the society should be published monthly, it might be wise to change our time of meetings from the third to the first Thursday of each month, so as to give time for the reports to be given into the hands of the printers promptly. In conclusion, I have only again to thank you, and to express the hope that each succeeding year will increase the usefulness of our society and the welfare of its members.

The Society then went into an election of officers, which resulted in continuing all of the present incumbents.

President—Dr. S, G. Moses.

Vice President—Dr. L. Ch. Boisliniere.

Recording Secretary—Dr. T. F. Prewitt.

Corresponding Secretary—Dr. George J. Engelmann.

Treasurer—Dr. W. H. Ford.

Publication Committee—Drs. G. A. Moses, W. L. Barrett, T. F Prewitt.

SELECTIONS.

VINEGAR FUMES IN BRONCHITIS, ETC.—Dr. Richardson, in the *Philadelphia Medical Times*, calling attention to the histological revival of motion in cilia and ciliated cells when exposed to the action of dilute acetic acid, or to the fumes of vinegar, suggests that the latter may be a potent stimulus to cilia in their normal position on the mucous membrane. As this wave of ciliary movement has so much to do in bringing out the mucus, (which in bronchitis, and similar diseases, is poured forth to excess), and thus freeing the clogged up air-passages, we have both an explanation of the old woman's cure for a cough in hot vinegar, and a strong incentive to use it—in spray from an atomizer, or otherwise—more persistently and systematically in bronchitis and allied disorders. It would also guide us to employ it in opium-poisoning, in paralysis, and in all prostrating diseases, when the lungs begin to fill up, probably in part as a consequence of enfeebled ciliary movement.

CHRONIC BRIGHT'S DISEASE, Dr. R. further says, is so intractable in nature as to be a matter of universal experience, and that even a faint hope of greater success in its cure is worthy of consideration. One chance of successful treatment seems to lie in cutting off the supply of fat (for example, by an exclusive skim-milk diet), at the outset of the attack; and for this an early diagnosis of incipient fatty degeneration is necessary. Frequent observation of the remarkable power which osmic acid has of blackening, and thus detecting extremely minute globules of fat, suggested the idea that this agent might be advantageously employed in recognizing fatty metamorphosis in its commencement, and on trial it has been found that osmic acid does enable us to discover in epithelial cells particles of oil so small as ordinarily to elude detection. The acid solution in water should be used, of the usual one per cent. strength, and this preparation, when secluded from the light, keeps perfectly well for months, and even years. Its value in recognizing fatty degeneration elsewhere, as, for example, in the voluntary muscles, the heart, etc., is obviously great.

ANNOUNCEMENTS FOR THE MONTH.

HOSPITALS.

CITY HOSPITAL, corner Linn street and Lafayette avenue—D. V. Dean, M. D., Superintendent in charge—*Clinics.*

Mondays,	A. M.,	9 to 10,	Prof. Robinson, Medical.
"	"	10 to 11,	" Lankford, Surgical.
Wednesdays,	P. M.,	3 to 4,	" Smith, Medical.
"	"	4 to 5,	" Hodgen, Surgical.
Thursdays,	A. M.,	9 to 10,	" Bauduy, Nervous Dis.
"	"	10 to 11,	" Lankford. Surgical.
"	"	11 to 12,	" Michel, Eye Diseases.
Saturdays,	P. M.,	3 to 4,	" Smith, Medical.
"	"	4 to 5,	" Hodgen, Surgical.

ST. LOUIS MULLANPHY HOSPITAL, corner Grand avenue and Montgomery street—In charge of the Sisters of Charity.

Monday, 11 to 12.	Drs. E. H. Gregory and N. B. Carson, Surgical Ward. Dr. G. A. Moses, Female Ward. Dr. L. L. McCabe, Male Medical Ward. Dr. W. C. Glasgow, Ward for Diseases of the Throat.
Tuesday, 9 to 10.	Dr. S. Pollak, Eye and Ear Out Clinic.
" 10 to 12.	Dr. E. H. Gregory, Surgical Clinic. Dr. L. Ch. Boislinier, Gynæcological Out Clinic. Dr. S. G. Moses, Children's Out Clinic.
" 12 to 1.	Dr. W. C. Glasgow, Out Clinic, Chest and Throat. Dr. L. L. McCabe, Medical Out Clinic.
Wednesday (Same as Monday).	
Thursday, 9 to 10.	Dr. S. Pollak, Eye and Ear Out Clinic.
" 10 to 12.	Dr. E. H. Gregory, Surgical Out Clinic.
" 11 to 12.	Dr. S. G. Moses, Children's Out Clinic.
" 12 to 1.	Dr. W. C. Glasgow, Out Clinic, Chest and Throat, and Ward.
" 12 to 1.	Dr. L. L. McCabe, Medical Out Clinic.
Friday (Same as Monday).	
Saturday (Same as Tuesday).	

ST. JOHN'S HOSPITAL, Twenty-third and Morgan streets—Conducted by Sisters of Mercy.

Mondays,	A. M. 10 to 11,	Drs. Shaw and Langan, Medical.
"	" 11 to 12,	Prof. Prewitt, Surgical.
"	P. M. 2 to 3,	Drs. Kingsley and Steer, Children.
"	" " "	Dr. Todd, Ear, Head and Throat.
Tuesdays,	A. M. 10 to 11,	Drs. Shaw and Langan, Medical.
"	" 11 to 12,	Prof. Prewitt, Surgical.
"	" " "	" Michel, Eye.
"	P. M. 2 to 3,	Drs. Kingsley and Steer, Children.
"	" 2 to 4,	Dr. Papin, Gynæcological.
Wednesdays,	A. M. 10 to 11,	Dr. Shaw, Diseases of the Chest.
"	" 11 to 12,	Prof. Pewitt, Surgical.
"	P. M. 2 to 3,	Dr. Todd, Ear, Nose and Throat.
Thursdays,	A. M. 10 to 11,	Drs. Shaw and Langan, Med.
"	" 11 to 12,	Prof. Prewitt, Surgical.
"	P. M. 2 to 3,	" Kingsley, Children.
Fridays,	A. M. 10 to 11,	Drs. Shaw and Langan, Medical.
"	" 11 to 12,	Prof. Prewitt, Surgical.
"	" 11 to 12,	" Michel and Dr. Stuver, Eye.
"	P. M. 2 to 3,	Dr. Todd, Ear, Nose, and Throat.
"	" 3 to 4,	" Papin, Gynæcological.
Saturdays,	A. M. 10 to 11,	" Shaw, Diseases of the Chest.
"	" 11 to 12,	Prof. Prewitt, Surgical.
"	P. M. 2 to 3,	" Kingsley, Children.

ST. LUKE'S HOSPITAL, Eleventh and St. Charles streets—*Episcopalian.* Mondays, Wednesdays and Fridays, p. m., 2 to 3. Dr. J. Green, eye and ear.

ALEXIAN BROTHERS' HOSPITAL. Daily, Dr. Wesseler, Medical. Daily, Dr. Lutz, Surgical.

MARINE HOSPITAL. Dr. Walter Wyman in charge.

SOCIETIES.

ST. LOUIS MEDICAL SOCIETY, Polytechnic Building, meets Saturdays, p. m., 8 to 10. Papers are read, morbid specimens exhibited, cases related, and discussions had. Officers elect for the year 1879.—President, Dr. C. W. Stevens; Vice President, Dr. H. H. Mudd; Recording Secretary, Dr. W. E. Fischel;

Corresponding Secretary, Dr. I. N. Love; Treasurer, Dr. Wm. Porter.

MEDICO-CHIRURGICAL SOCIETY, Mercantile Library Building, N. B. Carson, M. D., Secretary, meets Tuesdays, (second and fourth in each month), p. m., 8 to 10. Morbid specimens, cases and discussions.

OBITUARY.

Thomas Allen Arnold, M.D., died of diphtheria, at his home in Columbia, Mo., December 5th, 1878, *æt.* 37 years. He was a graduate of the State University, and took his professional degree at the St. Louis Medical College, in 1869. After serving a term as assistant physician in the St. Louis City Hospital he established himself in practice at Columbia, where he continued in the ardent prosecution of his profession until the arch enemy, which he had been so successfully combatting for the weal of others, claimed and secured him a victim. His life was sacrificed by his zeal in the discharge of duty. He had performed tracheotomy on a patient suffering with diphtheria, the tube becoming clogged, he impulsively sucked upon it to clean it out, virus thus gained access to his system and in two weeks proved fatal.

Dr. Arnold was an active member of the Medical Society of Boone County, and of the Missouri State Medical Association. The former, at its regular monthly meeting, held December 10th, passed appropriate resolutions as a tribute of respect to the memory of the deceased.

James Henry Davenport, M. D., died at Roxbury, December 26, 1878. A most worthy young physician, graduate of Harvard and of Columbia, and, though for years in poor health, accomplished much to his enduring praise. He embodied the result of his investigations in a work on The Cure of Rupture, noteworthy for its literary and scientific excellence.

MORTALITY TABLE.

CITIES.	ESTIMATED POPULATION.	DEATHS DURING THE PAST MONTH.	DEATH RATE PER 1000 LIVING.	
			FOR PAST MONTH.	FOR PAST YEAR.
New York	1,093,171	1,884	22.42	23.42
Philadelphia	876,118	1,195	17.73	21.54
Brooklyn	549,438	692	16.38	25.50
St. Louis	500.000	432	11.13	11.22
Chicago	460,000	572	16.56	17.83
Boston	375,476	557	19.28	20.10
San Francisco	300,000	369	14.76	
Cincinnati	280,000	401	18.62	15.81
New Orleans	210,000	384	23.76	
Memphis	48,000	429	59.00	25.00

METEOROLOGICAL.—For Past Month.

CITIES.	TEMPERATURE, F			HUMIDITY.			
	Highest	Lowest.	Mean.	Highest.	Lowest.	Rel. Mean.	Rain, in's.
St. Louis	59°	30°	40.2°	100	29	66.3	3.38

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.	METRIC. Gms.
♏i. or gr. i. equals - - - - -	06
f℥i. or ℥i. equals - - - - - 4	
f℥i. or ℥i. equals - - - - - - 32	

The decimal line instead of points makes errors impossible. A teaspoon is 5 Gms.; a tablespoon, 20 Gms.—*Metric Bureau.*

ST. LOUIS
COURIER OF MEDICINE
AND
COLLATERAL SCIENCES.

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ORIGINAL COMMUNICATIONS.

TRICHIASIS AND DISTICHIASIS; REFLECTIONS UPON THEIR NATURE AND PATHOLOGY; WITH A RADICAL METHOD OF TREATMENT.

By CHARLES E. MICHEL, M. D., *Prof. of Ophthalmology and Histology in the Missouri Medical College.*

BOTH of these affections are characterized in a general way by a deviation inwardly of the cilia, which lean towards or touch the globe. From the above, must be excluded such cilia as are only accidentally turned inwards. Healthy and properly-directed cilia, softened by moisture, may be swept backwards between the lids, and, drying in that position, give great annoyance; this is not trichiasis, and simple, self-evident measures will relieve.

Sometimes cilia, that are apparently normal in every other respect, touch the globe permanently: a vicious change of direction of the hair follicle is the cause. The cilia themselves are frequently distorted and twisted in various directions, and, independently of the inclination of their follicles, curve backwards, so as to irritate the eye; here a diseased papilla is to blame.

Often a single hair is observed to spring from a part of the free or flattened tarsal margin, which physiologically

does not give rise to such appendages, or several may make their appearance, all of them inclined backwards: these are new products, which must occupy us for a few moments.

Two varieties of the above named supernumerary hairs must be distinguished; in the one form, "distichiasis," when it is uncomplicated, we have true cilia precisely like the normal ones, arranged with great regularity in a row; they spring from the flattened tarsal margins, near their posterior or conjunctival edge, in the neighborhood of the openings of the Meibomian glands, and are directed towards the globe. Generally, only the third of the superior eyelid, towards the external canthus, is affected, and in the cases which I have seen, the deformity was symmetrical and bilateral; that is, the right and left superior palpebræ were similarly conditioned. This malformation is of embryonic origin. The second variety, namely, "trichiasis," differs widely from the foregoing; the original cilia may affect an irregular distribution, but rarely present any analogy to a double row; the upper and lower lids are always more or less involved, and the cilia, besides touching the eyeball, are most generally distorted; again, although both sides may be diseased, there is no corresponding double row of cilia on each. Moreover, before trichiasis has reached this stage, supernumerary newly-formed hairs have made their appearance; these scarcely ever resemble the cilia, which they are not, but are thin, whitish hairs, mostly distorted, of variable length, several (at times) making their exit from one and the same follicular opening; they resemble the lunago. Scattered broadcast, they grow indiscriminately from every portion of the tarsal margins; I have seen them spring from the edges of the mucous lining membrane of the lids. When many of these are added to the already diseased cilia, the case is one of "general trichiasis." Newly-formed hairs make their appearance on the tarsal margins only after marked exciting causes; irritations and inflammations.

Brudenell Carter[1] makes the following assertion: "In

1. Prac. Treat. of Diseases of the Eye. London. 1875.

many text-books we find a distinction between 'trichiasis,' a state in which the eyelashes are simply incurved, and 'distichiasis,' in which it is assumed that there is a double row, the outer of normal growth and position, the inner directed towards the eye. I have never seen what could be properly described as distichiasis, but I have frequently seen some hypertrophy of the tarsal margins, attended by growth of cilia in abnormal numbers, some of them being misdirected." This is a description of trichiasis, and I readily believe, as the author states, that he has never seen a true distichiasis; certainly not an uncomplicated case. This deformity exists, nevertheless, and with an example before him, the most casual observer could not have the slightest room for an assumption; indeed, the affections are radically different in origin, and pathologically, could not be treated of under the same head. When distichiasis is uncomplicated, we have before us nothing but fully developed true cilia; their arrangement is the same as that of the physiological cilia, but the symmetrical row is posterior to, and distinctly separated from, the latter, by the normal, healthy structure of the lid. The follicles and lashes being directed backwards towards the globe. Often the affection is bilateral and symmetrical, as I myself have seen it. The history of the case dates the deformity back to early infancy; although present, it may have escaped observation at birth, for eyelashes are then very rudimentary affairs. The cilia, however, may not have grown until later. Galezowski,[1] quoting Vidal on this subject, says: "When this affection occurs without having been preceded by any disease of the eye, we can admit with Vidal (de Cassis) and Quadri, that the hair bulbs lying dormant in an embryonic state, at a given moment have been rapidly developed in a vicious direction." This "moment of rapid development," however, I am not ready to admit happens later than adolescence, when a second growth of hair physiologically takes place. I look upon these supernumerary cilia in the same light that I do su-

1. Galezowski. Traité des Maladies des Yeux. Paris. 1875.

pernumerary fingers and toes; they are deformities of undoubted embryonic origin; confirmatory evidence of this is obtained from the presence of other malformations in the same individuals. Schweigger[1] states that, "in many cases, there exist still other congenital anomalies: for instance, in one case which I observed, there was epicanthus, and bilateral ptosis congenita; in another case, I found a cleft in the soft palate."

That modified trichiasis is not distichiasis, is easily proven; thus, it is never observed unless disease or injury of the lids has preceded it; in the modified form, which is mistaken for, or improperly named distichiasis, the new hair products grow, to a certain extent, indiscriminately from all parts of the palpebral margins; no symmetrical row exists in reality. The newly grown hairs are not true cilia; they rarely resemble true cilia, but are essentially pathological new products; the papillæ which grow them were originally simple, cutaneous papillary elevations, which, from continued irritation, have taken on an abnormal action, resulting in a pathological formation.

The symptoms of trichiasis and distichiasis are in some respects identical. The mechanical irritation of the globe, common to both, may result in its total loss as an organ of vision; it is most remarkable, however, to witness the amount of irritation which the ocular conjunctiva will bear at times; I have seen persons, with quite a number of large ingrowing cilia constantly sweeping the cornea and adjacent parts, who scarcely complained of any inconvenience, the eye being reddened only occasionally; this more frequently in distichiasis. This is no doubt to be explained by an hypertrophic thickening of the epithelial layer taking place; the irritation induces the excessive secretion of cells, which serve to protect the ordinarily exposed nerve terminations.

In general trichiasis, when the stage of madarosis (baldness of the lids) has been nearly reached, the tarsal mar-

1. Prof. C. Schweigger. Hand-Book of Ophthalmology. (Translation.) Philadelphia. 1878.

gins lose their well-defined edges; they are rounded off by cicatricial transformation, which occasionally results in the drawing up, over the external margins of the lids, of the loose integuments of their facial aspect, without, however, displacing the tarsal cartilages. When this happens, we have a never-ending source of trouble to contend with; for the papillæ of the lunago take on an increased action, and the hairs become sufficiently long and stiff to do harm.

I shall not enter further into the consideration of the various symptoms attending these affections; most of the text-books in ordinary use give good descriptions of them. I shall content myself by simply calling attention to the fact, that ciliary blepharitis is present in all cases of trichiasis not of traumatic origin, as well as in complicated distichiasis, where the lids are diseased to any extent. Distichiasis may, and does exist without ciliary blepharitis.

The treatment of trichiasis and distichiasis is no unimportant matter, even though immediate loss of vision is not threatened; trivial as these affections sometimes appear, as long as they last existence is a curse, life loses its charms, and the sufferers become profoundly despondent, and sometimes suicidal; for years they have been hopelessly seeking relief, and finally they are frequently worse than when they applied for treatment.

In the October number of the *St. Louis Clinical Record*, of 1875, was published an article, in which I gave an account of what I then considered an improved surgical treatment of trichiasis and distichiasis; namely, by electrolysis. In the said article, I detailed, in a concise way, the various procedures which I had employed before ultimately perfecting the operation. For years, indeed, very early in my professional career, I felt the inadequacy of our means of controlling these deformities, and even then devised some of the methods which I later put into execution. I at once directed my efforts to the discovery of a sure means, by which I could destroy the hair papilla, alone.

At the very onset, I rejected epilation as inefficient and unwise, when intended as a curative measure. In the above named article I remarked: "I have now several timid patients, in whom I have been practising evulsion of cilia as soon as felt, for as long a period as ten years, who to-day have a larger number of offending lashes, that have become as stout as the hairs in a fine beard. I look upon the practice as decidedly worse than useless. After evulsion, the hair not only grows with greater rapidity, the more frequently it is pulled, but it also increases in thickness, so that downy hairs in time become full-grown cilia. This is easily explained. In the process of evulsion, the formed material (shaft of the hair) only is removed, the hair breaking off within the follicle at a point where it is yet soft; the papilla, which secretes or forms the hair, remains intact; it is only irritated by the operation, which causes a hyperæmia, with increased activity of function, and consequently increased rapidity of formation of the hair.

"Occasionally, it may be that evulsion does produce sufficient inflammatory action in the papilla to cause its suppuration and destruction; but this is far from being the ordinary result, especially when there is no complicating blepharitis. That trichiasis and distichiasis may exist with no perceptible blepharitis, is certain. A marked case of the kind presented itself last year at my clinic at St. John's Hospital; the affection (distichiasis) had existed since infancy; evulsion had failed to relieve, and the growth of the cilia had increased. But blepharitis complicates the vast majority of cases, frequently producing, after a time, that unsightly baldness of the lid—madarosis. Now, since the tendency of the affection is already in this direction, we can readily understand how evulsion might hasten the result, and be mistaken by the surgeon for the prime cause of the hair destruction.

"I have previously said that the operation of evulsion was worse than useless; for since, notwithstanding every precaution, the hair is very frequently merely broken off

at the surface of the skin, it is very soon after, long enough to scratch the cornea more severely than before, being sharper and stiffer. For this reason I have frequently preferred not to remove long cilia as a temporizing method; having seen the same patient, in a passably comfortable condition for a long time, while the cilia were full grown, return shortly after evulsion had been practised, with much more severe inflammation of the conjunctiva, and decidedly more suffering than when the lashes were long." I am to-day still in accord with the above.

My first attempt at destruction of the hair papilla was made in 1869. With a most delicately-constructed electro-cautery platinum point, manufactured expressly for the purpose, I successfully removed several cilia; but I at once perceived that the destruction of the tissues could not be properly regulated with this agent, so I immediately abandoned it for a far better operation, which I described as follows:[1] "In a small platinum cup, or a silver spoon, a piece of nitrate of silver is fused; a fine sewing needle (No. 8) is then gently warmed, and the point dipped into the liquid silver nitrate, so as to coat about two millimeters of its point with a delicate film of caustic, which adheres firmly to the steel. The lid is then everted with the tip of the forefinger of the left hand; a lance-pointed needle (the old cataract-couching needle, with a rather broad point, will answer) is made to split the hair-follicle to its base, the cilium still being *in situ*. During the operation, I generally use a one-inch convex lens, to assist in accurately locating the opening of the hair-follicle. A drop or two of blood usually escapes from the puncture. When all bleeding has stopped, and the blood carefully wiped away, the caustic needle-point is passed into the small incision, where it is twirled around a few moments, to cause the nitrate of silver to dissolve. In some of my cases the result has been absolutely perfect, leaving no trace whatever of the minute operation; in a few cases, the cauterization set up an inflammation, which resulted in a minute

1. Loc. Cit.

abscess of the lid, of no greater moment than an ordinary stye. This method I still regard as useful and safe, especially if the needles are coated with care, not allowing an excess of the nitrate of silver to adhere to the point of the needle in the shape of a small bead, which will inevitably happen if they are dipped cold into barely-fused caustic."

The only disadvantage of this simple procedure is its tediousness, when we have to deal with many hairs. The needles have to be prepared with care, one for each hair, and not too long before the operation, else the nitrate attacks the steel and spoils the caustic. Practitioners not possessed of a galvanic battery, or having only a few hairs to destroy, away from the office, will find this a most admirable operation. In fact, it is nearly perfect; for the cauterization is sub-epidermic, very slight, and practically limited to the papillary region. These delicate cautery points can be used in the same cases, and be applied for similar purposes as the electrolytic needles.

About this time I was treating a case of epithelioma of the superior eyelid, by applications of electrolysis, and it occurred to me that I could advantageously employ the same agent for the destruction of the papillæ of the cilia. Without delay, I tried it, and succeeded beyond my most sanguine expectation. I could apply the method with the utmost rapidity, security and accuracy. No apparent cicatrices were left. I made the operation the basis of the paper already mentioned; further on I will describe it.

The ordinary surgical procedures of the day are, in my opinion, defective, inasmuch as they do not meet the exigencies of the case; some are useless; others disfigure, and several are so severe and extensive that their disproportions stand in marked contrast to the apparent trivial nature of the affection against which they are directed. A brief consideration of the best known of them will suffice.

In Prof. Schweigger's [1] recently translated work we find the following: "If, upon an otherwise normal lid, only a single cilium, or a very small number of them, turn inward

1. Hand-Book of Ophthalmology.

and irritate the cornea, they may be restored to their normal position in the following manner: Both ends of a fine thread, or a sufficiently long hair, are placed together, and passed through the eye of a needle, so as to form a loop. The needle is then inserted just at the root of the falsely-placed cilium, and is brought out exactly in the line of the normal cilia. The thread is then drawn through, so that the point of the cilium is brought to view between the normal cilia. If the cilium do not fall out too soon, the position and direction of its follicle may be in this way permanently changed. This method was described by Celsus as '*illaqueatio.*' Occasionally, in patients who are annoyed by a sensation as if a foreign body in the eye, there may be found, either with the naked eye or by the help of a lens, a number of very fine cilia (strongly developed lunago), which, with their points, touch the caruncula lacrymalis. Epilation is the only remedy."

As regards the "only remedy," epilation, I have already expressed my opinion, and that "strongly developed lunago" are cilia, I deny. With respect to the other method, the author's own remarks show what little faith he has in the operation; it hangs on the slender hopes of a constantly pulled-upon cilium "not falling out too soon." Comment is unnecessary. This little operation has, no doubt, occasionally succeeded, when it could be applied; but, in my opinion, not in the manner intended. I explain the favorable results under such circumstances as follows: The thread remaining in position a sufficient length of time, "if the cilium do not fall out too soon," acts as a seton; a small cicatrix is thus obtained, which, when it contracts, is sufficient to pull the follicle outwardly in its direction. The principle is the same as that involved in Desmarre's operation, in which he excises a minute fold of the skin, close to the implantation of the deviated cilium. I described, in the article already mentioned, a very simple and successful procedure to which in similar cases I had had recourse: "In cases where a few offending lashes spring from the outer margin of the lid, I have occasionally

passed an armed needle through a small fold of the skin, in front of, contiguous to, and parallel with the hair-follicle. The thread is tightly knotted, and soon cutting its way through, leaves a minute vertical cicatrix, pulling the follicle and contained cilium outwards." I now believe it would be an improvement not to knot the thread tightly; by leaving it loosely looped in position for a given time, it will act as a seton; a minute, hidden cicatrix will thus be obtained, which will, in the same manner as I hold it does in the Celsian operation, pull the follicle and contained hair outwards.

Brudenell Carter[1] in his most excellent treatise on diseases of the eye, says: "When the cilia are redundant, it may be sufficient for a time to remove them by epilation whenever they touch the eyeball, and it will occasionally happen that atrophy of the follicle will be produced. Epilation, simple as it seems, requires, not only some care, but also the use of forceps with opposing surfaces which are so well fitted, and just so much roughened, that they will hold the finest hairs: * * * badly made forceps will cut them; * * * although epilation, in the case of mere redundancy, sometimes leads to cure, it is more common for the cilia to grow again and again; * * * it is then desirable to abandon the practice, and destroy the bulbs from which the ingrowing hairs proceed. If there are only two or three in number, this may be done by the actual cautery, for which Mr. Wordsworth's needle, or a common sewing needle, fixed in a handle and heated in a spirit lamp, furnishes a convenient instrument." Now, I will ask, Why not entirely forego the epilation, which the author admits only ("occasionally") accidentally succeeds, and frequently unavoidably fails, leaving stumps "far more irritating than a perfect eyelash?" We should certainly not, under these circumstances, employ a procedure, concerning the success of which so distinguished a surgeon and ophthalmologist further says: "It is more common for the cilia to grow again and again."

1. Op. Cit.

As regards the use of the actual cautery in the form recommended, although the instruments are more readily obtained, they are not nearly as convenient of application, and certainly act no better than the galvano-cautery points which I formerly used, and abandoned as unmanageable.

Williams, of Boston,[1] proposes to destroy the papillæ by means of a needle dipped in caustic potassa, and passed into the follicle after the removal of the hairs, the tarsal margin having been previously greased. I admit that I never tried this, although the method is mentioned by other good authorities. Too many very patent difficulties and objections presented themselves to my mind. In my electrolytic method, hereafter to be described, I had, previous to the insertion of the needle, tried the anterior removal of the cilia, but invariably failed to find the follicular openings. I made use of strong and weak lenses, in a favorable light, besides exercising all the ingenuity at my command. A slight movement of the patient, the flowing tears, or the natural resilliency of the tissues; the minuteness —and, in fine hairs, absolute invisibility (to ordinary powers) of the openings of the hair follicles, were more than I could contend with successfully. Another objection I conceived would be, the impossibility of protecting the globe, in many instances, from the caustic; tears secreted at the moment of application would diffuse the potassa over the conjunctiva. I also doubted that a liquid could be conveyed to parts beneath the surface by the means employed: it seemed to me an invariable result would be, that all but an infinitesimal portion of the liquid would remain on the outside, when the needle was forced into the skin; nor could even that residual portion replace the point when withdrawn, as blood would follow it, if the vascular papillæ had been reached. Yet the method must have succeeded; the authority of the proposer, and of those recommending and mentioning it, is a sufficient guarantee of this. I have found an explanation of the difficulty, which is satisfactory to myself. I had had some personal experience in a

1. "O. H. Rep'ts," v. iii, p. 219.

somewhat similar procedure, devised by myself, for the same purpose: I believed that the caustic had little, if anything, to do with the result, but that here, as in my operation, the right direction of the papilla having been accidentally hit, the papilla itself (or, perhaps, its immediate neighborhood) having been wounded, was destroyed by an increase of the already existing inflammation which affects such cases. In my little operation, I used simply the bevelled point of a hypodermic needle, which with its sharp-cutting, double edge, was admirably adapted to destructive laceration, when rapidly twirled. I succeeded occasionally, but the method was too uncertain to satisfy me. When we consider the chances in our favor, of successfully transfixing an irregularly-located sub-epidermal point, measuring only about 0.1128 m.m., we are not surprised at failure, and readily see the impracticability of the method. The electro-cautery, the nitrate-of-silver-tipped needle, and the electrolytic needle succeed under similar circumstances by acting on the tissues at a distance, in every direction from the needle-points.

The knife has been employed to excise hair papillæ and follicles; but while it is a more formidable means than the exigency should require, it may fail, and always leaves marked cicatrices. Thus, in my article on this subject, already so largely quoted, I said regarding an operation of this class: "Galezowski's method[1] of excising the hair follicle, carving out a portion of the thickness of the lid, between the conjunctiva and the skin, is ingenious, but the cicatrix resulting from the removal of one-third of the thickness of the eyelid is sufficient to deter from its employment, in the few cases to which it might be applicable. When a preponderating majority of the true cilia are viciously deviated, we should, perhaps, for the cosmetic effect, prefer, and have recourse to, some one of the appropriate operations contained in the text-books. I have used the expression "perhaps," because, as I will show, I have good reasons to expect that by the electrolytic method I

1. Traité des Maladies des Yeux; Paris, 1875.

shall be able, in a measure, to restore to their proper direction the deviated hairs that are worth saving.

I shall now describe, as heretofore published,[1] the electrolytic method of dealing with these affections.

"The agent is electricity (a constant-current battery of 8 to 20 medium-sized cells is all-sufficient); the form, electrolysis. I pass a fine, gilt needle into the hair follicle, and allow the current to produce the electro-chemical decomposition of it and its papilla. The details are as follows: A three-cornered gilt needle (the finer the better, provided it be accurately inserted), mounted on an electrode about the size of a pen-handle, and connected with an insulated wire from the negative side of the battery, is made ready. I have an interrupter, which I control with my foot, inserted along the wire which comes from this pole, thus enabling me to first accurately place the needle in position before completing the circuit; an ordinary electrode, covered with a sponge, is connected with the positive pole. The patient is usually seated in a reclining chair, facing a good light (the erect position will answer); an assistant then takes the sponge electrode (the anode), and applies it to the temporal region of the side to be operated on; or, the patient can hold it firmly in his hand. Having the needle electrode (the cathode) ready, I break the current, by means of my foot-interrupter, and gently everting the lid, accurately place the needle-point into the opening of the follicle, which still contains the deviated cilium, and steadily press the needle in the direction of, and somewhat beyond, the hair papilla. This period of the operation is made more perfect by employing a lens of one or two-inch focus, which I hold between the fore-finger and thumb of the left hand, using the middle finger to evert the lid; or, an assistant, if at hand, may hold the lid. The patient had better be warned at this juncture not to make any sudden start when the slight shock accompanying the closing of the circuit is felt, lest the needle be displaced, I steadying at the same moment

1 "*St. Louis Clinical Record*," Oct., 1875.

the head as much as possible, to prevent such an accident. The circuit is now closed through my foot-interrupter, and the electrolytic action allowed to go on, until a slight frothing up around the stem of the needle is plainly perceived, when I at once break the current. The quantity of the whitish froth is a comparative measure of the effect produced. Sometimes, the cilium comes away with the needle, being stuck to it by the frothy material mentioned. Generally, it is only necessary to seize the hairs with a pair of depilation forceps, or simply with the fingers; but no force is to be used in this step, for if the cilium does not come away by merely taking hold of it, it is a certain indication that the operator either has not obtained sufficient electro-chemical decomposition, or that the follicle and papilla have not been reached, in which case another application should be made at once. The more accurately the needle has been placed, the less the necessity for any great degree of electrolysis. With about eight ordinary sized elements, I accomplish the desired effect in from two to five seconds; with twenty-eight elements, one second suffices. I prefer to use few elements, for the reason that when the circuit is closed, scarcely any shock is felt; this, however, can also be attained as follows: Notwithstanding many elements are used, the sponge, not too wet, must be very gradually brought in contact with some portion of the body; the palm of the hand, for instance."

Since the above was written, I have made use of this operation in a vast number of cases, both in private, and at my public clinics. It has stood the test of years, and I can now, with the utmost confidence, offer it to the profession on its own merits. I treat distichiasis in the same way.

Experience has suggested a few modifications, of a practical nature, which are as follows: I invariably dispense with the foot-interrupter, and scarcely ever need an assistant. I never place the anode (positive pole) elsewhere than on the palm of the hand. The patient takes hold of an insulated electrode, and slowly closes the circuit when told to. They learn to do this very carefully; experience soon

teaches them that sudden, firm contact produces a disagreeable shock, so they feel their way, and graduate the pressure to suit themselves. I do not here speak of children. Those who prefer to have the pain soon over, without regard to its intensity, press firmly, and thus shorten the duration of the application; the process being intensified by this more perfect closure of the circuit; others, more timid, are willing to suffer longer, provided the pain is not so great—they are taught to make light pressure on the sponge.

Individuals vary greatly in their sensitiveness to pain; but, although most patients seem to suffer acutely from these short applications, I have in two cases only, been forced to use an anæsthetic. Immediately on the breaking of the current the pain seems to subside. It is far better to let the patient stop the action, by removal of the sponge from the hand, than to break the current by the removal of the needle; for, in the first instance, no shock, or only a very slight one, is felt: whereas, in the last, a very strong shock occurs, which, besides giving pain, makes the patient start, the sudden movement causing the needle in its exit to scratch the lids; truly an unimportant injury, but one which can be very easily avoided by pursuing the above directions. I now use even weaker currents than I formerly did; the pain is lessened, and the effects produced more manageable. Almost any ordinary medical galvanic battery can be used for this operation; if, with its poles introduced in water, decomposition slowly takes place, the apparatus will answer. Always test the battery in this way before proceeding with the operation. Instead of using the finest needles, as I formerly did, I have found that a No. 8 sewing needle (a medium size), properly sharpened, and gilt, is preferable, for the following reasons: As already stated, it is impossible, under the most favorable circumstances, to hope for more than an occasional transfixion of the papilla, and we diminish our chances of destroying it, in direct proportion as we diminish the area of the acting surface of the point of the in-

strument: hence, I do not now make the points very tapering. I find that, when a very fine needle is introduced into the integument, it soon decomposes the tissues in immediate contact with it, and then ceases to act on the solid parts; if held steadily, as it should be, a frothy and serous exudation surrounds it in the little sheath that it has made for itself. Under such circumstances more papillæ escaped than when I used larger needles. The difference in the result in either case is otherwise imperceptible. I am yet to see an appreciable cicatrix as the result of the electrolysis; but, with very fine needles, we increase the necessity of re-applications, which are painful. These last reflections are made because it has been suggested by others that an exceedingly fine needle was an important improvement in the method; but I fear it might, on the contrary, if generally adopted, help to bring discredit on an operation which should, I think, remain until something better is discovered.

A very decided improvement in the needle, however, would consist of a means of properly and permanently insulating its shaft, up to within 2 m.m. of its point. From the very beginning I applied to various manufacturers of surgical instruments, and also enamelers, for such a needle, but have been told that it could not practically be made. A moderately fine needle, covered with rubber, was the best I could obtain; but a shoulder exists where the rubber coating stops, which prevents its easy passage into the skin. Failing in that direction, I myself have coated my needles, with shell-lac. I use the finest and hardest of photographer's varnish, applying it with a brush or otherwise. It loosens after several applications, and must be re-applied; if carefully done, however, I believe it will answer.

Just after writing the above paragraph, a trivial occurrence has accidentally thrown in my way an instrument, which, while it is within the reach of every one, I believe will practically be perfect enough for all purposes. I had use for a pin, and selecting a black one from the family

pincushion, accidentally bent it; surprised at this, as I had been accustomed only to steel ones of that color, I inspected it, and found that it was an ordinary brass pin, which had been coated with a black composition. Suspecting that this was a non-conductor, I took it to my battery, and found that I was correct. The coating adheres very firmly, but can be scraped off; when heated in the flame of a spirit lamp, it emits the odor of shell-lac or sealing-wax. I am informed that they can be had at the dry-goods stores. I shall get a package, select the most perfectly coated ones (some are imperfect), and with a fine file, or better, a whetstone, make the points three-cornered. Scraping will expose as much more of that extremity as necessary. By cutting off the heads, and scraping that end, they can then be used in my little needle-holding electrode. This last is nothing but a delicate clamp, similar to those found on the end of the useful little tool-handles, the butts of which are filled with minute awls, chisels, saws, etc. One of my instruments is a permanent fixture of the kind; the others consist of the terminal clamp only, which can be screwed into any other electrode handle, suitable for the mounting of different ends. Until better can be furnished, I believe that I have all that is necessary. It would be useless to gild the points of the pins, for when the coating wears off from them, the points can be cut off, and the pin sharpened higher up, or a new one substituted.

Occasionally, a cilium is reproduced, when apparently its papilla had been destroyed. This is to be explained as follows: Since the probable position of a given papilla can only be roughly guessed at, when the needle misses it widely, from distortion of the part and displacement of the follicle, the papilla escapes, but the needle crossing the soft root of the hair sub-epidermically, at a point between the papilla and the surface of the skin, decomposes the newly-formed hair substance, and the shaft comes away easily. I have frequently recognized the accident at the time, by the appearance of the hair bulb.

Recently I have attempted the preservation of all cilia

which were moderately healthy. In imitation of my little operation, which, by a seton thread, obtains a cicatrix near the base of the follicle, I pass my needle into the integuments in front of, and parallel with the hair follicle, allowing sufficient tissue to intervene, so that the follicle and papilla will not be injured; a very slight destruction of the parts is effected; after which I keep the cilium cut close, until I find that its follicle has been sufficiently drawn outwardly. If one application does not produce the desired effect, I repeat the little operation as often as necessary.

A number of cilia close together are treated in a similar manner; indeed, where there is simulated distichiasis of the entire tarsal margin, I feel convinced that it could be successfully employed, and will try it. I have not yet operated on many cases in this manner, but so far it has succeeded well, and I expect much from it.

In many cases of partial, or even complete entropion, I propose carrying out the same principle. By passing larger needles sub-cutaneously in the proper directions, and there producing cicatrices, I am satisfied that I will be able to force the lids back into their normal position.

As regards the after effects of electrolysis thus practised, they are simple in the extreme. After the operation, patients return at once to their ordinary avocations, feeling relieved and comfortable. A few complain of slight soreness about the parts, especially if fifteen or twenty hairs have been removed at a sitting; but cold water relieves that in a short time, and by next morning it has entirely passed off. I have never seen the least continuous inflammation, the smallest ulceration, or other accident follow it; notably, no abscess, as once or twice did occur in the nitrate of silver method.

Something more than surgical measures is needed in the treatment of trichiasis and complicated cases of distichiasis. Constitutional, as well as local treatment, is important. The lids are to be kept scrupulously clean, but not irritated by too frequent washings; the blandest fluids for

this purpose are the best; Decoct. Radicis Althæ, with a slight addition of chloride of sodium, fulfills the indications perfectly. Soap must be kept away from the tarsal margins; it is not needed; the best and mildest of them are irritants. The lids being clean and dry, apply constantly Unguentum Hydrg. ox. flav. (Pagentescher's oint.); two grains to two drachms will do. See that the roots of the lashes are well anointed. This remedy almost deserves the name of specific, in the treatment of the ciliary blepharitis, which always exists in these cases. If the blepharitis is not relieved naturally, more new hair products will constantly be generated, and cause us to believe that the former hairs have not been destroyed. The constitutional treatment is to be tonic. I prefer the Tinc. Ferri Hydro-Chlor., or the Pil. Ferri Prot. Carb. Let the iron be taken an hour or more after meals; it will not then by chemical reaction be converted into a tannate by the tea, coffee or vegetables which almost invariably enter into the diet of our patients, and will at that time meet sufficient gastric juice in the stomach to cause its easy assimilation.

In the "*Archives of Dermatology*, for October, 1878," I find an abstract of a paper, by Dr. W. A. Hardaway, of St. Louis, read before the American Dermatological Association, at Saratoga, in August last, on the "Treatment of Hirsuties." His experience with my electrolytic operation, as a dermatologist, in the removal of superfluous hairs, is there given. His operations were, of course, confined to the skin proper, and especially to the complete or partially bearded faces of women. The manipulations that he employed, and the results obtained, are about the same as in ophthalmic practice. Then follows the account of an interesting discussion, which took place upon the subject of hair destruction, during which Dr. Piffard remarked that, "He did not see how these gentlemen were able to get the needle into the follicle while the hair was still there, on account of its minuteness," meaning, I suppose, that the follicle is not large enough to hold the hair and the needle at the same time. Strictly speaking, this is true, but when

I expressed myself thus, I supposed it would be understood that I forcibly introduced the needle, overdistending the follicle, perhaps rupturing it, or, more probably, split it to its base with the cutting edge of the triangular needle; this certainly is possible with any follicle, however fine its hair may be, especially when it is remembered that the opening of the hair follicle is funnel-shaped, and that the little operation is executed under a convex lens, sometimes of even an inch focus. But Dr. Piffard goes on to say: "Indeed, it is only necessary to get sufficiently near the follicle in order to accomplish the work of destruction;" which virtually dispenses with all difficulties even while dealing with the finest hairs. I had already given the same explanation, prior to seeing the report of this discussion. Further on, Dr. Piffard is made to say that "he denied that Neumann ever got into the hair follicles at all with his galvano-cautery operation, for it would certainly be most extraordinary if two wires could be introduced, without touching each other (as was essential to the process), into so small a cavity as that of a hair follicle. In Neumann's operation there must necessarily be a great deal of burning of tissue, and this would leave an unsightly scar." This criticism of Neumann's operation is a rather sweeping one, and since it applies with equal, if not greater force, to my own galvano-cautery operation on the cilia, which I had already performed as early as 1869, I feel called upon to explain. Dr. Piffard is mistaken, as regards the unavoidably large size of such a cautery point; it is not necessary, as he positively asserts it is, that "two wires, not touching each other," should constitute such a point; a little ingenuity easily does away with that difficulty. The instrument that I devised is simple in the extreme. It consists of two insulated, stout copper wires, passing through a small ebony handle; into the terminations of these is cut two deep slits, destined to receive the point. There is a Y-shaped piece, cut from a sheet of platinum, the stem of the Y being about 6 m. m. long; the branches of the Y are tightly clamped in the slits in the copper wire,

and the point reduced to about the size of a No. 8 sewing-needle, and sharpened. Now, when the platinum branches (which are moderately thick) are brought to a white heat, the point being but a continuation of them, is heated also, and that to a sufficient degree to cauterize. I imagine the same idea, or a similar one, probably, occurred to Neumann. But, when one speaks of passing an actual cautery point into a follicle to its base, from the nature of the circumstances it cannot absolutely be true; for, even though the point were smaller than the follicle itself, it would destroy the successive parts of the follicle as it came in contact with it, even before it could enter its lumen; so Dr. Piffard's objection on this score is of no importance. That the agent is not manageable I admit; hence I discarded its use; but the eschars are by no means as large as is intimated they must necessarily be, for the point is much smaller than Dr. Piffard supposes possible, and the degree of heat is not as great in the point as in the connecting branches of the platinum. Again, the point is applied only for an instant.

On looking over the same number of the *Archives*, I find, under the head of "Original Communications," an article entitled, "A New Method of Permanently Removing Superfluous Hairs," by L. Duncan Bulkley, A. M., M. D. It is described as follows: "The method to be described is founded upon the idea of reaching down into the follicle, after extracting the hair, and throroughly breaking up its bottom and sides, thereby exciting an inflammation which seals it from its base to its orifice." As regards the claim of originality and actual priority in the devising and execution of this method, or rather one substantially the same, I think Dr. W. A. Hardaway and some other medical men of this city, from their own knowledge, would not consider me uninterested. The similar proceeding already detailed in this paper is the operation alluded to; but, as I said before, I had so poor an opinion of its success that I abandoned it long ago. It had suggested itself to me the first time that I heard of Dr. Williams'[1] operation, the

1. R. L. O. H., Rep. III., 219.

success of which, as I have already stated, I ascribed to the transfixion of an already diseased papilla. Dr. Bulkly says, in his paper: "Two or three physicians have recently mentioned to me a plan of destroying the hair follicles by means of electrolysis. * * * I am not aware that this method has been mentioned in print, nor do I know how successful or permanent the results have been." (The results of others, of course, since the author, further on, admits that he has tried the operation himself, and, no doubt, has formed an opinion of his imperfect success.) The unimportant fact, that this procedure has been in print since 1875; that it has also been re-copied into at least one other medical journal,[1] and that a similar method is described in Piffard's "Treatise on Diseases of the Skin," (London and New York, 1876), may have escaped Dr. Bulkley's observation; but, judging from the quotation above, it does appear a little singular that he seems to have forgotten conversations on this subject, which occurred between himself and Dr. Hardaway, as well as with myself, on the occasion of his visit to St. Louis, in June, 1877.

Of the proposed method in Dr. Bulkley's paper I have a few words to say:

The object of the procedure has already been quoted from the article; the author then goes on to state that he uses a three-sided, straight, surgical, or glover's needle, with perfectly sharpened edges; the needle is fixed in a delicate handle. Seizing the hair with a pair of forceps, he at the same time places the point of the needle at the opening of the follicle; he now extracts the hair, and slips the needle at once into the empty follicle; (no mention is made of a convex glass to assist in this step of the operation.) The needle "is then thrust in to a little greater depth than that occupied by the hair, as shown by the root-sheaths on the extremity of the latter, and with a delicate touch it may be readily perceived when it has gone to the bottom, or rather when it has penetrated the latter a little, and its sides are closely embraced by the follicle."

1. Butler's Compend.

The needle is then "given a number of turns and twists, by rotating the handle between the thumb and forefinger," thus "thoroughly breaking up the bottom and sides of the follicle, thereby exciting an inflammation, which seals it from its base to its orifice."

This, in my opinion, is really nothing but a bad modification of my own operation. In both, the attempt is made to mechanically destroy the papilla with a needle. In my procedure the follicle is spared as much as possible, and the papilla is attacked as vigorously as possible. In the other method the follicle necessarily suffers most in degree and frequency, and the papilla least. The object of the operator and the nature of the instrument used secures this undesirable result. All of us know full well that the walls of the follicle cannot reproduce a hair, hence nothing can be gained by its destruction and "sealing up." On the contrary, should the papilla in such a case escape, as it most frequently does, there is established a most unfortunate condition, as would naturally be expected; hence the author is forced to admit that "occasionally it will be found that the inflammation has sufficed to cause the external portion of the follicle to be obliterated, while the deeper portion, where the hair is formed, still remains intact, or nearly so. In this event, a hair is reproduced, and not being able to gain exit, it will coil itself up, or it may run beneath the surface of the skin for a distance, and cannot be gotten at without a puncture of the overlying cuticle. In these cases it is often very difficult to reach and destroy the whole of the follicle, but it can be accomplished with care," and the author should have added, with the production of additional cicatrices. Other quite possible and probable results, under the same circumstances, would be the formation of small abscesses or cysts with the hairs in them. Now, where is the necessity for incurring such undesirable accidents? It certainly does not appear in the article that the sealing up process had an object. The instrument used by the author, apart from its objectionable three sharp sides, is defective in a most

important point, namely: the extremity which comes in contact with the papilla; this part is extremely fine, its cutting corners scarcely perceptible, and not calculated to lacerate, or rather cut and drill away the papilla. Now, the one which I employed was an ordinary, fine, hypodermic syringe point, the upper edges of which are blunted. If this is examined, it will be seen to very nearly fulfill every requisite indication; the stem is smooth, and the slanting point presents two sharp and rather broad edges, admirably adapted to laceration or cutting away when it is rapidly rotated. I used a convex lens to assist in accurately placing the needle-point at the orifice of the follicle, and demonstrated that I virtually entered the follicle (from one side, at least), notwithstanding the presence of the hair, by bringing it out attached to my needle in a fair percentage of applications; I had fairly dug it out. Yet, with these advantages in my favor, I can agree with the author, who expresses himself thus: "I am safe in saying that not 50 per cent. of the hairs removed at an operation will be permanently extirpated." Nay, I still feel very safe in placing the successful results at less than 15 per cent. The reverse, however, is the case when we come to consider my electrolytic method; for, although concerning it, Bulkley says: "I have tried this in combination with my own method, but did not find that any advantage was gained over that with the needle alone," etc. I claim that by it, fully 90 per cent. of the larger hairs are at once and permanently destroyed, and of the downy and almost invisible hairs, about 50 per cent.

ON THE TREATMENT OF YELLOW FEVER.

By R. G. Wharton, M. D., Port Gibson, Miss.

IN writing a short paper on the treatment of yellow fever as it appeared in Port Gibson, during the late epidemic, I shall confine myself to practical remarks, and not attempt to theorise about its nature, origin, or modes of diffusion. These questions I shall leave to those eminent

physicians and scientists, who, under the auspices of the Public Health Association, are now investigating them with all the advantages of combined experience and learning. We may well hope that their investigations will throw much light on what is now obscure, and correct many erronious opinions which have been widely accepted as true, by those who have had no experience with yellow fever, as well as by many who have had such experience.

The epidemic which has but lately passed away, was so wide-spread, so malignant in its type, so communicable from one place to another, so destructive to life, and so blighting to the commerce of the whole country, that it has excited an interest in the minds of our people, far beyond what was ever felt before in any other epidemic. People at the north, as well as at the south, begin to realize the conviction that they too are liable, at some future time, perhaps not far distant, to be visited by this dreadful scourge, and to suffer the horrors of a pestilence which seems to defy, in so many cases, all the resources of the healing art. We are hopeful that much good will result from the investigations above alluded to, not only in the treatment, but especially in the prevention of the disease. It may be shown as the result of those investigations, perhaps, that nothing but a national system of quarantine will prevent its introduction into our country; and if so, there is no doubt that it will be established in due time. That no local sanitary measures are sufficient to keep out the disease from any community, if the germs of it are introduced therein, is, I think, the almost universally accepted opinion of those who are most conversant with it. While the opposite opinion that it is of endemic origin, and to be classed with filth diseases, is held almost entirely by those who live outside of those portions of our country which have been ravaged by it.

Symptoms:—There is no one symptom, which of itself, is characteristic of yellow fever in its first stage, but a combination of symptoms, which is variable, from which any one symptom may be absent in a genuine case. An

attack of yellow fever is usually ushered in suddenly, or after a short warning, with chilliness, cold feet and hands, headache, most commonly supra-orbital, through the temples, in the vertex, or occiput, pain in the lower part of the spine and sometimes over the whole body. The eyes are suffused with conjunctival redness, and there is a burning sensation in them; the headache is accompanied with arterial throbbing, and is aggravated by the slightest motion of the head, by noise, and even by a loud tone of voice. Soon the chilliness passes off, the fever rises with flushed face and hot skin, the respiration is often very much embarrassed, the pulse is weak and very frequent, often as high as 130 in an adult; I have seen it 165 to 170 in children 10 and 12 years of age; the thermometer marks 100° to 105° in a severe case, the tongue soon becomes coated with a white or brownish fur, with red edges. After a foot-bath, a perspiration breaks out and may continue during the whole time of the fever. There is a peculiar odor to the perspiration which is easily recognized by the experienced physician or nurse, and which has been the means of distinguishing the yellow fever in doubtful cases. After the perspiration has continued some time, the pains abate, the pulse becomes slower, the temperature falls, the respiration is easier, and the patient sleeps more or less during the fever.

In the great majority of cases yellow fever is a fever of one paroxysm, but of variable duration. In the white race it lasts about 48 hours, often 72, and in rare cases 96 hours or longer. Again, it may pass off in 24 or 16 hours, or even in a shorter time. When the deferrescence of the fever has taken place in mild cases, the patient feels entirely relieved of all pain or uneasiness, and if left to himself would get up the next day and go about his business. In severer cases, after the fever has passed off, he is very much prostrated, the pulse is weak, the skin cool, the temperature may fall one or two degrees below the normal point, the pulse becomes slower and may go down to 50. If this state of prostration is not speedily relieved, he

soon sinks beyond all hope of recovery. In nearly every case after the fever, there are pains in the stomach and bowels, more or less severe, which require prompt treatment, as they often cause great distress and are very liable to provoke nausea and vomiting.

In the late epidemic, a train of nervous symptoms was very often observed, of a most distressing and alarming kind. These were sleeplessness from the onset of the attack, extreme restlessness, the patient rolling from side to side, delirium, an irrepressible desire to get out of bed, great mental agitation, the patient seeming to be frightened. In such cases the pulse becomes frequent and very weak, nausea and vomiting come on, and before long the dreaded black vomit closes the scene.

Black vomit is so characteristic of yellow fever, that the Spaniards have given the name *vomito*, to the fever. Yet many cases die without black vomit. I believe not one-half of the fatal cases have this symptom. Sometimes it comes on before the subsidence of the fever; most commonly after the fever has gone off, and even a day or two after. The vomiting which occurs the first day of the fever, as in malarial fevers, is beneficial, the patient throwing up undigested food or bile. But when nausea and vomiting come on the second day, or afterwards, it is a very alarming symptom, and must be restrained by all the means in our power. Black vomit is preceded, in many cases, by a very copious secretion from the throat and fauces, causing a constant hawking and spitting. This effort is soon followed by nausea and vomiting, at first of water which may be on the stomach, then of mucus, at first clear, soon interspersed with brownish flakes, which become darker and darker, till at length the black vomit is thrown up. In many cases, instead of black vomit, there are black, offensive discharges from the bowels. These black discharges are but varieties of the hæmorrhages, which are so characteristic of yellow fever. Hæmorrhage from the gums is very common, also from the uterus, and pure, red blood is often vomited up, or passed from the bowels. The

skin usually does not become yellow, unless the case is protracted, till after death. It is often very red, resembling scarlatina, not only in the face, but over the body; and like the latter disease, is followed by desquamation after the patient has become convalescent. The urine is highly colored; in mild cases the secretion continues free during the whole fever. It becomes albuminous in the evening of the third day, at first slightly so, then more-and-more by the fourth or fifth day. Suppression of urine is not uncommon, and sometimes occurs in cases where the fever was by no means high, or of long duration. The alvine discharges, which are produced by the purgative dose usually given, are natural or bilious, and often continue so during the whole attack. There is a tendency to constipation in most cases, caused, no doubt, in part by the sweating process to which the patient is subjected.

Diagnosis:—The diagnosis of yellow fever, in the first case or cases, has always been considered to be difficult, even when the physician has had some experience with it. The inexperienced are almost always deceived by it. A careful study of the combination of symptoms above enumerated, will generally enable us to form a correct diagnosis, especially if there is any apprehension of yellow fever from its prevalence at the time in other places with which the suspected case has had any possible communication, either by persons or fomites. We are sometimes called to see patients in the second or third stage of the disease, who have not been seen by any physician, and are questioned as to the kind of fever. If, on inquiry, we learn that the patient has had a fever which was followed by unusual prostration, if there had been severe pain in the head and back, or limbs, if the eyes had been red, or are so still, if there had been, or still is, much nausea, or vomiting, if there are more or less of the nervous symptoms, such as restlessness, desire to get out of bed, if delirium, if there is hæmorrhage from the gums, if there is suppression of urine; according to the number of the above written symptoms, we can, with more or less certainty, diagnose it to be a case of yellow fever. In all cases which

are doubtful, it is the only safe rule to diagnose yellow fever. I was called this season to see a patient with fever, in the country at the house of a gentleman where there were a number of persons who had fled from town, I found the patient, a girl eleven years of age, suffering very little; there was no pain at all; the skin was not very hot, and there was apparently nothing to distinguish it from the ordinary fevers of the season. I was assured that the strictest quarantine against the town had been kept up, and I was requested to come out in linen clothes for fear of carrying the fever to the household. After a careful and anxious examination, I decided that it was a case of yellow fever; and this decision rested on only one symptom,—the frequency of the pulse. It was 165, and weak. I had observed this peculiar kind of pulse in nearly every case. An error in diagnosis here would have been attended with serious consequences, as my decision sent all the refugees back to town, to take the fever as already infected. But the sequel confirmed the diagnosis, as the fever spread rapidly through the household.

Treatment.—If the patient is attacked after a meal, even several hours after, it is best to relieve the stomach with a gentle emetic, either ipecac or mustard and salt. He must be put to bed and covered with one blanket in hot weather, and have the feet and legs immersed in a hot mustard bath. In a short time give a purgative, either castor oil, or, if the stomach is too irritable to bear it, four or five grains of calomel, with eight or ten grains of bicarbonate of soda. Perspiration is encouraged by warm teas, balm, sage, or orange leaf, or by iced water. Most patients prefer the iced water, especially if the fever is high, and it should be given *ad libitum*. No treatment is so cruel and injudicious as that of withholding iced water from a patient, who is burning with fever and parched with the most intense thirst. Yet I have known and seen cases which were treated in this manner. To relieve the violent headache, besides the foot-bath, ice must be applied to the head. The ice is to be folded in a towel and applied dur-

ing the whole fever, or as long as it is pleasant to the patient. This must be done by a nurse who will sit by the patient, and move it continually over the whole head. Even when the patient is bathed in a profuse perspiration, we will find that the cold application to the head, so far from checking perspiration, will greatly encourage it. The ice-cap to the head will not do; the cold would be too intense and too painful. If the purgative dose should not operate in five or six hours, an enema of soap and water must be administered, to assist its action. The patient must in no case be allowed to get out of bed, when the bowels are moved, as nothing is more dangerous. He must always use a bed pan. The operation generally affords some relief, and if the perspiration continues free, the fever abates somewhat and the pains are much relieved.

No person but the physician and the nurses must be allowed to visit the patient. All talking, all noise of every kind, must be carefully guarded against. The nervous system in most cases of yellow fever is in a state of the greatest tension, and the most soothing kind of treatment is needed. For this reason, nothing is so dangerous to a patient as to be in the same room with another person ill with yellow fever. That so many are ill at the same time and cannot be separated from each other, is one great cause of the mortality in an epidemic of this disease. I have seen cases when the suffering and death of one patient caused the death of another in the same room, who was considered to be out of danger, and who would have recovered, but for the shock thus given. A loud tone of voice even, in many cases will cause nausea and vomiting, when we are most dreading such symptoms. If a death occur in a family, the utmost care is taken to keep it a secret; the body of the deceased has to be stolen as it were, out of the house, the nurses and the physician have to go formally through the chamber, now made vacant by death, to keep up in the mind of the patients, the delusion that their friend is still alive, and it is often ten or twelve days after the fever has gone off before we can venture to tell the sad news of death to the surviving patients.

It is only in favorable cases that a perspiration can be kept up continuously, during the fever. Often a hot foot-bath will cause only a slight perspiration which soon dries up, and even if we repeat it, will only succeed in keeping it up for a short time. In such cases we must sponge the whole body with whisky or vinegar, either cold or hot, as may be most agreeable to the patient's sensations; and this must be done not once or twice, but every few minutes, as long as the skin is hot and dry. By this means we reduce the temperature, quiet the nervous system, and relieve the nausea and vomiting which are so apt to supervene in this condition of the system.

It is too common in cases like these, when there is difficulty in getting up a perspiration, for nurses who are often left alone with the patient for hours, between the visits of the physician, to put more covering on him, to use more foot-baths and to give hot teas in order to force a sweat; this practice is very objectional, often very dangerous. Instead of this we must rely on frequent sponging, giving to drink iced water, or lemonade, or crushed ice to eat, and will often after a time see a gentle perspiration break out with great relief to the patient.

After the fever has gone off, in many cases the danger is but just begun. First, the prostration which succeeds the fever, is by far greater than would be expected by those who have not had experience with yellow fever; and if not promptly met, the patient sinks hopelessly in a few hours. When the temperature has fallen to 99° or 99.5° we must have him rubbed dry with a towel, and then rubbed over the body with dry mustard. This is a most powerful stimulus, and is always most refreshing to the patient, affording great relief to the distressing sensation of prostration so commonly felt at such times. After the patient has been rubbed with the mustard, the blanket with which he has been covered during the sweating process, must be taken off, and he must be covered with a sheet, that is in hot weather. In cool weather, of course, he must still be covered sufficiently to be made comfortable. If the blanket were not removed after the fever has passed off, the

sweating would be most disastrous, exhausting the patient's strength, and bringing on nervous symptoms and vomiting, to be speedily followed by fatal sinking. The thermometer is a most valuable instrument of precision in this condition, warning us with the greatest accuracy of the subsidence of fever and of the approach of collapse. If the pulse alone were consulted, we would often find it weak but very frequent, especially in nervous cases, and might conclude that the fever had not gone off, and that the sweating must still be kept up, to the ruin of the patient.

I have so often seen this great mistake made by the nurses, that I call special attention to it. I have heard of some patients who were kept in a state of profuse perspiration for 48 hours after all fever had passed away. No one but a negro could survive such treatment. Besides the rubbing with mustard, we must give brandy or whisky, a teaspoonful or more, well diluted, and repeated frequently, according to the degree of prostration.

Besides the danger from prostration after the fever, there is also great danger from the nervous symptoms which now first come on or become more aggravated by the great debility. The patient may have been sleepless from the beginning of the attack; severe pains in the stomach and bowels may now come on every few minutes; there may be distressing nausea or vomiting; the pulse, instead of becoming slow, as it does after most fevers, becomes very frequent and very weak; the patient is delirious; tries to get out of bed, and, though there is no fever, the face and neck are flushed and swollen, and there may be furious delirium. The indications now are to quiet the nervous system; to induce sleep, and to check the nausea and vomiting, and to relieve the pains in the stomach and bowels. Bromide of potassium, in twenty-grain doses, frequently repeated, will often afford the greatest relief, quieting the patient, relieving the pains and the nausea at the same time. Besides this, the patient must be rubbed with mustard on the extremities, if there is much prostration or any

coolness of the feet and legs, and we must give champagne or brandy and water in small quantities, frequently repeated. Even while we stimulate freely, it is necessary to keep cloths wet in iced water to the head, which will be found very grateful, and helps very much to relieve delirium. When the bromide fails, or is objectionable, chloral, in doses of fifteen to twenty grains, will be found to be an invaluable remedy in many cases. I usually give it in the following way:

℞ Chloral. Hydrat., ʒi.
Curaçoæ.
Mucilag. Acaciæ, ā ā. ʒi.
M. S. Tablespoonful for a dose.

I have often seen it relieve the most distressing pains in the stomach and bowels, and check the vomiting when it was most alarming. Mustard plasters to the stomach and bowels must also be used in every case where there are pains in them; they should not be made very strong, as they may have to be applied a good many times, and we should avoid blistering the skin. It is not safe to give more than one purgative dose, and that must be given the first day of the fever. It is very necessary, however, to move the bowels with an enema, whenever we have reason to think that there is any fœcal matter left in them. If the bowels have been very freely moved the first day, I usually wait forty-eight hours, and then give an enema. But if they are not well relieved at first, the enema should be repeated several times till a free discharge has been obtained. When the discharges from the bowels are black and offensive, as they are in bad cases, it is important to remove all this offensive matter by an enema, and stimulate the patient very freely at the same time.

When there is suppression of urine, sweet spirits of nitre, in cold water, or what is better, in Bethesda water, and in doses of twenty or thirty drops, repeated every hour, must be given, and dry cups be applied to the region of the kidneys. In one case, where there was entire suppression for fifty-two hours, and all other means had failed

I succeeded in restoring the functions of the kidneys with the galvanic battery, applying one pole to the pubic region, the other to the kidneys, alternately, using ten cells and reversing the poles frequently for the space of eight minutes. In an hour and a half afterwards there was a free discharge of urine.

Nausea and vomiting are to be expected in all cases of yellow fever but the mildest, and to relieve these symptoms will often be the most important indication to be met. They seem to be caused by the irritable condition of the nervous system, and also, I believe, by congestion of the capillaries of the stomach. This capillary congestion is manifested in the conjunctival redness, the red lips, and the tendency to hæmorrhages from various organs. When the irritability of the stomach comes on during the fever, crushed ice taken frequently will often afford great relief. Sometimes cold cloths applied to the stomach at this stage will check it. Lime water in tablespoonful doses is always to be given, as the vomited matter is very acid. When lime water disagrees or fails to relieve, small doses of bicarbonate of soda will often give relief. When vomiting comes on after the fever has passed off, we still give lime water. Apply mustard plasters to the stomach; have the extremities rubbed with dry mustard, or simply with the hand, as nothing is more soothing, and stimulate with champagne or brandy and water. The champagne is given on crushed ice, in doses of a teaspoonful to a tablespoonful, and frequently repeated. Brandy or whisky is given well diluted with iced water, and in small doses frequently repeated.

Black Vomit.—When the black vomit has come on in spite of all our efforts, there is but little hope for the patient. I do not know what has been the experience of the profession in other places this season, but in Port Gibson, recoveries from black vomit were exceedingly rare. The stomach, in most cases, has been found disorganized, the mucous membrane being thrown off with the ejected matters. From 5 to 7 per cent. of recoveries from black vomit has been the report of the most reliable physicians

in other epidemics. In my practice, this year, in more than twenty cases of black vomit, there was one who was reported by the nurses to have thrown up more than a pint of black vomit. I did not see it, as it was in my absence, but I consider the report reliable. The next morning, when I visited the patient I found him quiet and doing well, but very much exhausted. He made a good recovery. I had another patient—a girl, twelve years of age—who threw up one tablespoonful of pure black vomit, that recovered. A third case I had, in a patient who threw up several times the dark brown flakes of mucus, perhaps half a pint, who also recovered. I saw several recover after having passed dark or black discharges from the bowels. As to the remedies for black vomit, it will be seen from the above that but little can be done. Yet we must do something, as the patients sometimes live a day or two or even longer after the black vomit has been thrown up. We usually give champagne wine or milk-punch, sometimes pure lemon-juice. If the patient craves any particular drink, give it. I have known buttermilk in ice to be very refreshing, and to afford relief, at least for a time. Ergotin used hypodermically has been recommended by Dr. Lyons, of New Orleans, for black vomit, and it seems to be a rational means of treatment. I used the fluid extract of ergot with success in one case, which seemed to be hopeless, every symptom denoting speedy death; the patient was vomiting pure blood, and passing pure blood from the bowels. I gave teaspoonful doses every half hour, then every hour, till one ounce and a half had been taken, by which time I considered the patient out of danger. In several other cases I used it as a prophylactic, and was well pleased with the effects. But in many other cases it was too offensive to the stomach to be borne. Unfortunately I had no ergotin at that time. In most cases, after the black vomit the patient sinks rapidly, becoming unconscious of his condition. In other cases, he lives two or three days, and dies very hard, screaming and groaning in a most terrible manner, and in this way caus-

ing the death of other patients, who may be in hearing distance.

As soon as the fever has passed off and convalescence has begun, the utmost caution is to be observed to prevent a relapse. The patient at first will need only a little weak black tea, in small quantities. Soon we encourage him to take a teaspoonful of beef-tea every hour or two. He must be kept perfectly quiet; no talking must be allowed; his head must not be raised from the pillow; the clothes and bed-clothes must not be changed for twenty-four hours after fever, even when he is doing well; often it will be two or three days before they can be safely changed. The diet is gradually increased in quantity, allowing a mouthful of toast or of cracker, and being very careful not to oppress the stomach. It is not often safe to allow him to sit up in bed before the sixth or seventh day, nor to get out of bed before the ninth or tenth day, and few patients are safe in going out of the house till the twelfth or thirteenth day. I do not consider a patient perfectly free from the danger of relapse, if he is imprudent in over-exertion or in diet, for weeks after an attack of yellow fever, unless there has been a severe frost or freeze. I saw four cases of relapse this season in patients who had been going about for five weeks, apparently in good health, except that they were rather weak, and one of these died in two days, the others narrowly escaped death.

Relapse.—When from any cause a relapse has occurred, the patient is usually taken with a chill, followed by fever, the pulse is very frequent and very weak; there is generally severe headache, profuse perspiration, and the patient is very much prostrated. There is much nausea and vomiting; the skin and eyes are very yellow. The fever assumes the intermittent form in some cases, but unless the promptest means are used, the second paroxysm may prove fatal. In other cases the fever assumes a typhoid type; the patient has no pain; the skin is bathed in profuse perspiration; the pulse is weak and frequent. In most cases he is conscious; has no appetite, but little thirst; perhaps sleeps

well, but gradually sinks from exhaustion, in spite of all our efforts to sustain him. In other cases he is delirious for a week or more before the fatal termination.

The treatment of a relapsed case is generally very unsatisfactory. When an intermission occurs, quinine, in five or six grain doses, must be given and repeated until the patient is completely under its influence—and these are the most hopeful cases. When the fever is continued, we also give quinine, four or five doses a day; also milk-punch, and encourage him to take nourishment. Unfortunately most cases refuse all nourishment, and can scarcely be induced to take stimulants, but grow weaker and weaker till they are entirely exhausted.

I wrote in the description of symptoms that in most cases yellow fever is a fever of one paroxysm, but we not infrequently meet with cases which assume the intermittent type. After the first fever, we are surprised to find a second paroxysm come on, and generally more severe than the first. We must lose no time to get the patient under the influence of quinine, as otherwise the third paroxysm would be fatal.

I have in twenty or thirty cases, perhaps, given quinine immediately before the subsidence of the first paroxysm, anticipating a return of fever; and these cases have done well.

I have frequently, in the case of children, given quinine by enema, just before the subsidence of the fever, to prevent the fatal sinking so apt to occur after a severe fever. In the great majority of cases I have not given quinine at all. I think we still need some safe criterion to guide us in giving this remedy in yellow fever. No doubt it will prove to be very injurious if not given in the proper cases, while it has often been the means of saving life when rightly administered.[1]

1. [It is due Dr. Wharton to state that, while writing the above paper, he was very much occupied professionally, and had to write by snatches; that during the epidemic he could not keep notes of his cases, on account of the great strain on his mental and physical energies, having to treat some 334 cases of yellow fever in about ten weeks. After the paper was written, two additional cases fell under his observation, of which, time allowing, he kept notes. These, fortunately, we are able to append.—Ed.]

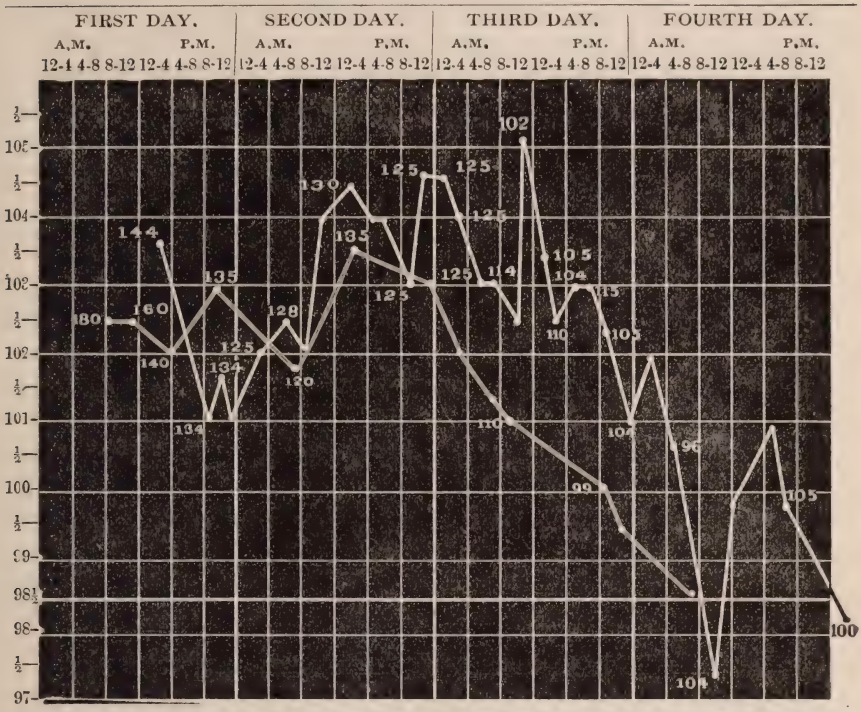
Case I.—Richard Hastings, three years of age, a refugee from yellow fever, returned home Nov. 25th, and ten days afterward (Dec. 5th) was attacked at 3 A. M. with fever. I visited him at 9 A. M. His pulse was 180, and weak; temp., 102.5°F. He complained of some pain in the back; no headache. He was partially well the day before. There was no difficulty, from the weak and frequent pulse, in making out a case of yellow fever. A hot foot-bath was ordered, and a purgative dose of two grains of calomel, with five of bicarbonate of soda, to be followed by an enema. The foot-bath produced no perspiration, and was repeated at 12 o'clock. At this time the pulse was 160; temp., 102.5°F. An enema was administered at 4 P. M., and produced a good operation. His face was now much flushed, eyes red, but there was no pain; he was thirsty and drank cold water, as much as he wanted. The second foot-bath produced no perspiration. Ordered the enema to be repeated at 8 P. M., and again at 12, M., as the operation produced by the first one was small. He slept during the day, and pretty well at night.

Second day.—At 7 A. M. the pulse was 120; temp., 101.75°F. As the skin continued very dry, had him sponged frequently during the day with warm vinegar; kept a cold cloth on the head; gave him cold water and warm tea to drink. Had an enema at 3 P. M., and again at 6 P. M. The discharges were small, but afforded much relief. He had another foot-bath today at 12 o'clock, but it failed to produce perspiration. He slept well this (second) night. The temperature kept up to 103° till 3 A. M., when it reached 102°. The kidneys acted once. The sponging with warm vinegar was continued once every hour during the night.

Third day.—At 7 A. M. skin still dry; temp., 101.5°; continued same treatment; he passed a quiet day. At 7 P. M. pulse 99; temp., 100°. As this was the third day, in anticipation of the depression which was expected, ordered four grains of quinine by enema every two and a half hours during the night. He passed a good night. On the fourth day, at 7 A, M., temp. 98.5°, he he was rubbed with dry mustard; gave him a little black tea; afterward two or three teaspoonsful of beef tea, alternating with same quantity of sweet milk, every hour. The urine was found free from albumen. His diet was gradually increased. On the seventh day he got out of bed, and on the eighth went about the house.

Thermometric Tracings of the Two Cases of Yellow Fever.

(The Figures Indicate Pulse).



The double line tracing refers to Case I. The solid line to Case II.

CASE II.—Wilhelmina Thaler, fifteen years of age, servant in the family of the first case, also a refugee from yellow fever, was attacked fifteen days after returning to town, at 11 A. M., with chill, followed by fever. She felt very badly the day before, and thinking she was about to have an attack of yellow fever, she had taken a dose of oil, followed by an enema, which acted well. At 2 P. M., when first visited, she had severe pain in occiput, back and limbs; the eyes were suffused, with a burning sensation; pulse 144, temp. 103.5°. A foot-bath was now ordered, to be followed by an enema. The foot-bath produced a very slight perspiration, which soon dried up. At 8 P. M. she was much nauseated; temp., 101°. Had another foot-bath.

Second day.—She passed a bad night—the headache was very severe; had cold cloths applied to the head continually; was sponged with hot whisky frequently; the kidneys acted well.

At 6 A. M. temp. 102.5°; skin dry. Ordered foot-bath, to be followed by enema. This produced a good operation. The foot-bath caused no perspiration. At 10 A. M. the headache was intense; the face very red; pulse, 130; temp., 104.5°. The sponging was kept up with hot vinegar, as whisky was disagreeable to her. During the second night the pulse ranged from 125 to 120; temp., from 103° to 104.25°, down to 101°. She slept rather more than she did the night before.

Third day.—At 7 A. M. pulse 114; temp., 103°. At 11 A. M. pulse 102; temp., 105.25°; seems very stupid; face very red; some nausea; skin has continued dry during the whole fever; the sponging is kept up almost constantly. At 6 P. M. had black operation—quite well—gave an enema, which produced another larger black operation; is quite indifferent; pulse 104; temp., 103°. I ordered five grains of quinine every two and a half hours, and a teaspoonful of whisky occasionally to anticipate the prostration which might be expected during the night. She was much nauseated for several hours; tried to get out of bed several times. After having taken two doses of quinine, was more quiet. I was summoned hastily at 3 A. M., just as she had thrown up about two tablespoonsful of black vomit. I gave her hypodermically two grains of ergotin; also, one tablespoonful of lime-water and some champagne wine. She became very restless after this. Repeated the champagne and lime-water, the latter several times, as the nausea was excessive. At 5:15 A. M. she vomited again six or eight ounces of very dark brown matter, not quite so black as the first. I had repeated the dose of ergotin half an hour before this second vomiting. The champagne seemed to turn the stomach; had to discontinue it. After this the nausea gradually abated, and in about three hours she was relieved of it for several hours. I had an enema of twelve grains of quinine administered, as I did not like to disturb the stomach with it. She had urinated twice during the last night, and once about 6 A. M.

Fourth day.—At 9 A. M. pulse 104; temp. 97.5°. I had her rubbed over the whole body with dry mustard, and had the quinine enema repeated, and gave whisky occasionally. At 3 P. M. quite restless; occasional nausea; no vomiting since 5 o'clock this morning. It was remarkable in this case, that the first effort to vomit, brought up black vomit. Another hypodermic injection of two grains of ergotin was now given; pulse quite weak. Had two small discharges from bowels of black mucus. She

continued restless, and took fifteen grains of chloral two or three times. At 11 P. M. became exceedingly restless; so much so that she had to be held in bed by two nurses, quite delirious. After 3 P M. became quiet, and slept some. She has passed no water since yesterday at 6 A. M., but made several ineffectual efforts.

Fifth day.—At 8 A. M. pulse 100, and weak; temp., 98°. Ordered toddy to be given every hour or hour and a half. At 10 A. M. complains of distension of bladder, as she had not urinated for twenty-five hours; tried hot cloths to bladder, as she would not submit to the catheter; then ordered enema of warm water. This brought a copious black discharge from the bowels, but there was no urine. Two hours later she passed from twenty-four to thirty ounces of a very dark, thick urine, with great relief. She went to sleep immediately, and seemed much better. Milk punch was given every hour or hour and a half. On testing the urine, it became almost solid, about four-fifths albuminous. At 5 P. M. gave an enema of twelve grains of quinine; soon after this she had a large, black, watery discharge from the bowels. At 7 P. M. another dark, tarry operation, very offensive. Had another enema of twelve grains of quinine at 9 P. M., and very soon after passed an ounce of pure red blood. She became quiet, and had a tolerably good night, taking toddy regularly every hour and a half or two hours.

Sixth day.—She appears to be better than she has yet been, is more relieved; has some appetite; gave a little black tea, and two teaspoonsful of beef tea every hour, alternately with milk punch. She passed urine at 2 P. M., twenty-six hours after the last discharge; it was still very dark and thick, and two-thirds albuminous. She slept very little during this day, but was quiet. There has been no fever since the night of the fourth day, but the pulse is very weak; has much thirst. She passed a restless night; pulse weak and irritable; not doing well; tried to get out of bed—delirious. The beef tea and stimulants were given regularly.

Seventh day.—She seemed more quiet than she had been during the night; was very thirsty; gave water more freely than I had done since the black vomiting; continued beef-tea with a mouthful of cracker every two hours. At 10 A. M. urinated again quite freely; urine still very albuminous. She seems weaker to-day than ever; pulse intermits; increase the quantity of stimulants to two teaspoonsful of whisky every hour or so.

Passed a restless night till 12, trying to get out of bed; after that hour more quiet; slept more or less.

Eighth day.—Quite weak this morning; pulse irritable and weak; intermits every twenty or thirty beats; seems very indifferent; hard to arouse; has passed no urine since 10 A. M. yesterday. Had a small, black, and very offensive operation; ordered an enema to bring away all such offensive matter. It caused a very dark and watery, offensive operation, but no urine. At 11 A. M. she had another black, tarry-looking operation, exceedingly offensive. The quantity of whisky given was two teaspoonsful every two hours, and four teaspoonsful of beef-tea every two hours, alternating them. She complained very much of pain in bladder, which is much distended. The face became very red; countenance looked much worse. Applied hot cloths to bladder for several hours, as she would not permit the catheter to be used. At 4 P. M. she discharged a large quantity of urine, and had an action from the bowels which afforded great relief. The urine was albuminous, about one-half. The alvine discharge was not so dark as the last.

Ninth day.—She passed a better night than any previous; slept as much as an hour and a half without waking, and is much better this morning. The pulse is 105, the face flushed, and there is considerable thirst, but the temperature is only 98°. Bowels acted naturally; also the kidneys. Continue the milk punch; also chicken tea, with a little cracker.

Tenth day.—Slept all night, entirely relieved; good appetite; allowed a soft-boiled egg for breakfast. Urine still albuminous, one-third. Had clothes and bed-clothes changed to-day. She had several inunctions with lard, and they seemed to afford great relief. Will allow her to sit up in bed to-morrow, and perhaps get out of bed the next day.

REMARKS.

This was a very severe case, and one of the few black vomit cases that recovered. It will be observed that cases which occur late in the season, when there is no longer an epidemic constitution of the atmosphere, may be as severe as any. The case is remarkable for the number and the quantity of the black discharges from the bowels. The effect of the ergotin was decidedly beneficial in restraining the black vomit and in checking the nausea, which had distressed the patient during the whole attack before it was administered.

ORIGINAL LECTURES.

CHRONIC INFLAMMATIONS.

By E. H. Gregory, M. D., *Professor of the Principles and Practice of Surgery and Clinical Surgery.*

[A LECTURE DELIVERED AT THE ST. LOUIS MEDICAL COLLEGE.]

Gentlemen:—You are acquainted with the red, hot, painful swelling of acute inflammation. I now introduce you to the white, cold, insensitive swelling of chronic inflammation. The symptoms of chronic inflammation are quite similar to those of acute, differing somewhat in order, and in relative prominence; in fact, the process is occasionally the remnant of acute inflammation. The symptoms in the beginning are often insidious, indicated by vague pain, slight swelling, and disturbed function. The duration of chronic inflammation is indefinite, and its causes, in many examples, wholly inscrutable; but unless some organ is destroyed which is necessary to life, or the strength is exhausted by protracted suppuration, the end is reached by the ultimate disorganization of the implicated structures.

Resolution is a possibility in chronic inflammation—surely the rarest of events. Resolution, by which term I mean a recedence, it may be even after several days duration of the inflammatory condition, is a *possibility* in chronic inflammation.

You have learned, in your study of acute inflammation, that the inflammatory neoplasm consumes and replaces the textures which it permeates, but in chronic inflammation the neoplasm may be negative in character, the tissue elements appropriating the material, thereby becoming larger and thicker, constituting the state of simple *hypertrophy;* and there is reason to believe that, in some instances, new connective tissue is formed by the inflammatory neoplasm and by blending with the pre-existing connective tissue, produces the condition of *hyperplasia.*

Elephantiasis is probably the result of this peculiar variety of chronic inflammation—specificated in some mysterious way. Chronic inflammation, when limited to the secreting surfaces,

makes up the various catarrhs—hydrops articuli and hydrocele. Pus may be a product of chronic inflammation; the creamy, inodorous and uniform fluid called *laudable pus* is never seen as a result of this process; on the other hand, the pus is thin, granular, flocculent, glairy, and often exhales the odor of the fatty acids. What is called pus is sometimes but a molecular débris, and we may have in place of pus a cheesy pulp, blended with crystalline fat, the so-called caseous product, the latter corresponding to pus without the usual liquor puris.

In due course of time you will become interested in certain visceral changes, incident to protracted suppuration, a deposit from the smaller arteries of the viscera of a peculiar material, characterized by its lardaceous consistence, a material thought to be allied to amylum; hence the change of structure resulting from its presence, has been called "amyloid degeneration." This substance is held to be largely cholesterine by some observers; by others, to be a substance closely allied to albumen, differing from albumen by its insolubility in acids containing pepsin. It and fibrin are the only organic bodies that pass in fluid form through the vessels, and outside of these coagulate firmly in the living body.

You have already learned that this peculiar visceral degradation has been ascribed to the large abstraction of alkaline salts, which are contained in great quantity in the pus.

Large collections of pus, so-called cold abscesses or congestive abscesses, occur in connection with chronic inflammation, and the most interesting point in connection with these abscesses is, that they frequently do not originate at the point where first seen, but have moved, partly from the sinking of the pus, partly from ulceration, from a distant site; for instance, there may be suppuration along the anterior part of the spinal column, which, following the loose connective tissue behind the peritoneum, and along the sheath of the psoas muscle, finally appears as an abscess beneath Poupart's ligament. The practical point is, shall these abscesses be opened? I answer, no. Aspiration is justifiable where tension is great; but to open these collections in the ordinary way, is to consign the patient to pyæmia, or to an incorrigable hectic fever; and why?

I have already said, the pus reaches the site of pointing from some distant place; its track is long and sinuous; its walls perhaps dense, therefore do not collapse after evacuation; air is

admitted to this warm, moist, cavity, yet containing pus in its recesses, and the result is fermentation, the formation of septic materials, which necessarily poison the blood. It has been advised by a late writer to open these abscesses, enlarging their passages at great risk, so that the bottom may thus be reached; but my experience is, that these abscesses are sometimes rebellious to all known surgical methods, even when the bottom is within safe and easy reach, sinuses persisting after being split and stuffed and escharotized perseveringly. You may ask, "What is the result if these abscesses are not opened by the surgeon?" They may open themselves. The practiced surgeon would put off the day as long as possible, remembering that nature's opening is better than an artificial one, however skillfully devised; when at last the abscess is perforated by inevitable changes, it may be proper in exceptional cases to enlarge the opening and employ antiseptic injections; this, however, would not be proper unless constitutional symptoms were imminent.

Sometimes these abscesses are stationary for a long period, sometimes disappear, sometimes form cysts, which remain for an indefinite period, the pus cavity healing upon its surface, producing a cicatricial capsule, enclosing a detritus of its contents.

You must remember that the neoplasm of chronic inflammation does not in all cases rapidly break down into pus, or undergo caseous transformation or disintegration; nor does it always exhibit the negative qualities referred to, in connection with hypertrophy and hyperplasia. On the other hand, the neoplasm may be developed into a vigorous fungus, constituting ostitis fungosa of Virchow and Volkmann, so-called caries sicca, the involved structures disappearing before the interstitial proliferation of fungus granulations, without the production of pus. The fungus form of chronic inflammation occurs most frequently in well-nourished children, whilst the atonic form of chronic inflammation is most frequently observed, in extremely attenuated subjects. Similar proliferation of germinal tissue detaches dead from living structures, which you will learn when on the subject of renal necrosis.

Causes.—We now come to consider the causes of chronic inflammation. As a rule, acute inflammations run a short and typical course, and must originate in causes that are temporary in their operation, whilst chronic inflammation seems indefinite in

its duration—this indefiniteness of duration implies some long-acting irritation, or one oft-repeated, or some abnormal reaction to simple irritation.

Continued irritation may be of a purely local character, as when a foreign body is lodged, or where parasites burrow and proliferate under the skin, as in certain eruptions, favus, pityriasis versicolor, etc. Under these circumstances the constitution, being a standard one, the removal of the irritating agencies is the cure of the disease. Suppose the constitutional condition below par, or some local predisposition in a part, the operation of simple irritation might excite continued inflammation, even after the removal of the irritating cause, because the tissue so injured is not in a condition favorable for the removal of the disturbance. The causes of chronic inflammation are generally obscure, and we must look for them in certain congenital or developed conditions of the whole body.

If the constitutional condition is bad, a condition of local debility must attach to every portion of the body; therefore, local predisposition must be found in many parts. How common is it to find children disposed to chronic swelling and suppuration of the lymphatic glands, skin, mucous surfaces, joints and bones! How common is it to find adults disposed to lung troubles, liable to colds, and to pains in different muscles and joints! How convenient it is to say, one is scrofulous, another syphilitic, another is rheumatic! But what do we mean? Simply that there is a disposition to chronic inflammation of certain textures; persons wherein an abnormal susceptibility, a seeming temporary irritation, is followed by a continued process of inflammation, with which in due time you will become familiar.

Whenever inflammation lasts longer than the irritation, and increases without any apparent additional irritation, there must be some constitutional defect, or local predisposition, or both, to enable us to reconcile the discrepancy between cause and effect; the causes of chronic inflammation must, therefore, be as permanent as the process resulting therefrom. Besides, there are many constitutional predispositions other than those which have heretofore been described as scrofulous, tuberculous and syphilitic; that peculiar interstitial proliferation of the connective tissue found in cirrhosis of the liver, morbus Brightii, grey degeneration of the medulla spinalis, etc.,

doubtless originates in some peculiar constitutional predisposition. To my mind the term *struma* has no very definite meaning, implying only some debility of the organism, with, perhaps, peculiar local predispositions. Again, tuberculosis, according to modern pathology, is but a nodular eruption, resulting from the contamination of the blood by the absorption of inflammatory products.

Ever think of the body as a unit, consisting, to be sure, of many parts, but all united in mutual dependence—not an indifferent organ or element in the economy—the perfection of every process and the integrity of every particle, alike dependent upon the concurrent action of the whole. All or any local defect must be the result or the cause of general indisposition. When, therefore, local debility is present, general debility is nigh.

Treatment.—General treatment of chronic inflammation. As it originates in constitutional causes, we first direct your attention to the constitutional conditions. Diet is, of course, of the first importance, it should be nutritious, of ready assimilation; frequent baths; residence in a fresh, healthful air. The digestive organs should not be neglected, and any disorder corrected by tonics and digestives. Remember that you have not to deal with a *materies morbi* in the blood, but a debility of the organism. Alterative medicines were once popular as a means of improving the diatheses peculiar to chronic inflammations—small doses of mercury were administered, and doubtless proved advantageous in syphilitic conditions, and by many modern authorities, mercury thus administered is held to be a tonic; cod-liver oil stands in the front rank, and linseed oil or the ground flaxseed seems, in certain instances, to agree better with digestion and better to fulfill the same ends. The oils are especially adapted to cases, where emaciation is a prominent feature. Preparations of iodine and iron are especially adapted to fat children, with fungus inflammations of the joints, and some easily digested preparation of iron is useful in cases marked with anæmia. Salt-water baths are also beneficial, and should not be overlooked; the seaside and mineral springs should not be forgotten, and in very weakly children, warm, nutritious baths, and in febrile conditions wrapping the body in wet sheets are important expedients. Remember that careful, general dietetic and local treatment of chronic diseases of bones and joints, and even the amputation of limbs, or the resection of joints may possibly prevent the development of tubercle.

Whilst we are attentive to constitutional treatment for chronic inflammation, we must not neglect local remedies. Absolute rest is of prime importance—prevents self-injury and anticipates congestions; plaster dressings, the agent of all others in securing rest; compression is important, and should never be neglected, where the sensibilities of the part does not forbid its use; moist warmth is sometimes most efficacious, covering the hydropathic wraps with oiled silk or gutta-percha cloth to maintain moisture; changing from hot to cold and cold to hot to favor the activity of the cutaneous vessels; fomentations with lead-water, mercurial salve, mercurial plaster, ointments of iodide of potassium, or iodine, may be employed advantageously. Electricity, as a discutient remedy, seems sometimes useful; ice-bags, leeches, cups, especially proper in inter-current acute attacks, are just as important in these cases as in primary acute inflammations. With Von Esmarch, ice continuously, in chronic torpid inflammations, is held in high esteem.

Derivatives are supposed to remove the inflammation from its locations to other points where it is less dangerous. Syme treated torpid ulcers with blisters Nitrate of silver, ʒ i. to the ounce of lard, rubbed on the swelling, seems a good counter-irritant, particularly adapted to joint diseases. Blisters to inflamed joints are most important. Tartar-emetic and croton-oil setons and issues are useful in man y cases—the actual cautery we frequently resort to in chronic troubles of bones and joints.

EMPYEMA.

By P. Gervais Robinson, M. D., *Professor of Practice of Medicine and Clinical Medicine, Missouri Medical College.*

[A CLINICAL LECTURE DELIVERED AT CITY HOSPITAL, DECEMBER 2d, 1878.]

Gentlemen:—I have brought before you this morning the patient, whom you saw for the first time two weeks ago to-day, that is, on the 18th of November, suffering from the effects of a pistol-shot in the left breast.

The history then given us is as follows:—

Dave. Morgan, colored, 24 years of age, born in Wisconsin, a steamboatman, was shot about 4 o'clock, on the afternoon of

November 4th, and was brought to the hospital the same evening. The person who shot him was standing directly in front of him and upon the same level. He suffers much pain, particularly in the region of the left kidney. The wound has not been probed. There is very little respiratory movement to be observed upon the left side of the thorax, and percussion gives a tympanitic resonance.

There are no cardiac murmurs.

The fifth rib appears to be broken near its cartilaginous junction.

The patient did not fall when shot, nor was his consciousness affected.

Nov. 6.—Patient has been suffering for some hours from constant and persistent hiccough, for which, ether and chloroform have been prescribed, and sulph. morphia to relieve pain. The morphia seems to have little effect, and patient states that he was under treatment at the Marine Hospital, for gastric ulcer, from April 1st to July 1st, and that he has been in the habit of taking considerable quantities of morphia, but has had none for two months past. He was just getting able to work when he was wounded.

Nov. 7.—The whole abdomen is distended, tympanitic and tender on pressure.

Crepitant râles are heard in lower portion of left lung. Has been vomiting a yellowish fluid from stomach. Prescribed a creosote mixture, and for nourishment, milk and lime-water.

Nov. 8.—Vomiting has ceased; pulse has been for last twenty-four hours, small, and 120 to minute; temperature 102 4-5°. Got a mixture containing tinct. digitalis, spirits nitric ether and ammon. acetatis.

Nov. 10.—There seems to be a double or to-and-fro friction cardiac bruit; pulse reduced to 88 per minute; heart sounds otherwise normal, but patient complains of pain in region of the heart and whole of left side of thorax is painful on pressure. Has a dry cough; posterior portion of chest is dull on percussion.

Such are the notes of the case as furnished us by Dr. Glasgow, into whose ward the patient was admitted.

You will remember when we examined the patient before you on the 18th, we found the following to be the features of his case:

There was seen a perforating wound just below the left nipple, from which a highly fœtid pus was constantly oozing, and which could be increased in quantity by gentle pressure of the external soft parts in the neighborhood of the injury. The fifth rib appeared to be broken, from the pain produced when pressure was made upon it, and from an indistinct sense of crepitation communicated to the fingers.

Percussion, when the patient was in the upright posture, gave very decided dullness, (flatness), anteriorly, laterally and posteriorly to a line above the nipple; above that line, there was resonance which was somewhat tympanitic in quality; in the region of dullness there was absence of vocal fremitus; auscultation showed absent respiratory murmur, corresponding with the area of flatness, and above, all around the chest, indistinct respiratory murmur, but there was no amphoric respiration nor amphoric voice to be heard at any part of the chest, nor in any change of the patient's posture. When the patient lay upon his back the line of dullness was correspondingly altered, so that the anterior or uppermost portion of the left thorax became resonant while laterally and posteriorly, as far as we could get at it, there was flatness. The heart beat tumultuously, and the apex appeared to be displaced somewhat to the right, but I could discover no murmurs, either endocardial or exocardial, and its proper sounds seemed to be normal.

There was much gastric distension, and the tympanitic resonance belonging to the stomach when distended, was found to extend high up under the ribs upon the left. I told you the symptoms recorded by Dr. Glasgow soon after the infliction of the wound indicated that the ball had perforated the pleural sack, permitting the entrance of air, but that I doubted whether it had penetrated the lung, in as much as the patient had not expectorated blood, nor did there occur subsequent signs indicative of pulmonary inflammation. The wound did not seem to communicate with the pleural cavity at the time we saw him, since no increase in the purulent discharge could be produced by changing the position of the patient.

The general aspect of the patient was bad; his face had an expression of pain and anxiety, and the dyspnœa was considerable. The temperature was constantly elevated and the pulse rapid and weak.

From the physical signs we concluded there was considerable

accumulation of fluid, which we supposed was purulent, in the left pleural cavity, and advised that it be withdrawn by means of the aspirator, and that the wound be enlarged and a tube be inserted to admit of thorough drainage and cleansing of the cavity by antiseptic washings.

This was done, as you remember, by my colleague, Professor Lankford, in your presence, and you saw how large a quantity of pus was drawn from the chest by means of this valuable instrument. The pus escaping by the puncture emitted the same offensive odor as that escaping from the wound about the nipple, thus indicating that air had penetrated the pleural cavity, whether from without or by a wound of the lung, we could not determine which.

The chest has been regularly washed out with a weak solution of chloral hydrate, and to-day you see that the patient is somewhat improved in condition, there being much less dyspnœa, much less fever, and much less discomfort generally, while his appetite has improved and he feels so much better that he talks of leaving the hospital, and even partially dressed himself this morning with that purpose. He is by no means well, but his chances of recovery have been doubtless very much increased, and if we can prevail upon him to be patient and submit to the tedious process of treatment which has been adopted, he may ultimately be restored to health.

This case then, furnishes you with an illustration of the value of the aspirator as an instrument or means of verifying or making sure your diagnosis, and of the necessity of evacuating any accumulation of pus which may have taken place within the pleural sack—for none of you who have seen the patient on these several occasions, before and after the withdrawal of the pus, can doubt the decidedly beneficial effects of the procedure. But I want to impress upon your minds the real value of this very admirable, and I may say, fascinating instrument to those who have used it, (the "aspirator"), and to tell you that in my opinion, its use alone is not sufficient for the cure of "empyema," and though you empty the chest again and again, it will not, as a rule, end in permanent relief, since the serous membrane of the pleura soon becomes converted into a pyogenic sack and a reaccumulation of pus rapidly takes place, constituting a constant and exhausting drain upon the system of the patient, and which can only be arrested by decided in-

terference with a view to alter the condition of the surface from which the pus may be said to be secreted.

Some of you who attended our clinics last winter, may remember the patient, Clayton, whose case was particularly interesting to us, because it involved a question of *diagnosis*, in which there had been expressed some difference of opinion. Some who had examined him had believed in the existence of a solid tumor of the left thorax, and had therefore opposed any interference. We examined the patient here together, and we came to the conclusion, from the history presented, namely, that of an ancient or long-standing pleurisy, from the dyspnœa and constitutional disturbance present, and above all, from the physical signs that there was no solid tumor, but an effusion, and doubtless purulent, in the pleural cavity. If the examination made such an impression upon your minds as it did upon mine, you will remember that 1st, there was decided enlargement or bulging of the left side of the chest; 2d, that the heart was seen to pulsate very decidedly to the right of its normal position; 3d, that there was little or no respiratory movement to be seen on the same side; 4th, percussion gave flatness upon the left side, except immediately below the clavicle, where it was tympanitic in quality, and posteriorly in the narrow region between the border of the scapula and the vertebræ, where there was some resonance.

5th. Auscultation discovered absence of all respiratory sounds in the regions corresponding with flatness, but in the subclavian, where the resonance was tympanitic, we had blowing respiration, and posteriorly, where we had some resonance, we had feeble respiratory murmurs. 6th. There was absence of both vocal fremitus and vocal resonance over the dull regions.

These physical signs could in my mind admit of but one interpretation, viz: effusion; for had the contents been solid, this must have become a conductor of sound to transmit either those of the heart or of the lungs, or of both, while vibration occasioned either by the pulsations of the heart, or by the voice, must likewise have been appreciable to palpation. That the accumulated fluid was purulent, I concluded from the long duration of the case and from the discovery of a circumscribed spot about the lower angle of the scapula, which was especially tender on pressure, and had begun to redden.

You will remember further that we concluded to "aspirate,"

and that we succeeded in withdrawing a large quantity of inodorous pus from the cavity of the chest, thus settling satisfactory the question of "diagnosis." The patient complained somewhat of a sensation of pressure during the evacuation of the fluid, which was to be expected from the long duration of the empyema or effusion, and the consequent compression and consolidation of the lung, which could not expand sufficiently to compensate for the vacuum thus established. Very little respiratory murmur could be detected, beyond the regions in which it was heard before the operation, and percussion was not materially changed. As was predicted at the time, the chest very soon filled up, when at our request and with the concurrence of Dr. Dean, Physician in charge, my colleague, Prof. Lankford inserted a drainage tube, after a second aspiration between the seventh and eighth rib, in a line let fall from the middle of the axilla. The cavity was washed out regularly and frequently every day, and after many weeks of careful nursing and treatment, the patient left the hospital, in a fair way to complete recovery, with of course, considerable contraction of the thorax on that side, and much diminished capacity of the lung.

In another case which occurred some time before, we succeeded by aspiration in withdrawing over fifty ounces of pus, which had already formed after a three weeks illness, constituting a case of purulent pleurisy. The lung partially expanded on evacuation of the fluid, and the area of resonance was considerably enlarged. The opposite lung gave no indication of disease.

A re-accumulation soon took place and the pus was again withdrawn to the quantity of thirty-five or forty ounces. Aspiration was repeated on several subsequent occasions and although there was considerable diminution in the quantity of pus withdrawn from time to time, it never ceased to form, and the patient steadily became weaker, under the constant drain upon his system, and sank from gradual exhaustion. It is to be regretted that a drainage tube had not been inserted and the cavity thoroughly washed out with antiseptics.

On *post mortem* examination the cavity was found to contain about a pint of pus, while the lung was carnified. The opposite lung presented a perfectly healthy appearance.

This case then, furnished a very instructive lesson, as showing, conclusively to my mind, that something more is necessary

to cure an empyema than the mere withdrawal of the pus, and that something is, to insert a drainage tube, without loss of time, and while the patient's strength is yet good, and while his nutrition is not yet impaired; to wash out the cavity thoroughly and repeatedly, with a weak solution of carbolic acid, or iodine, chloral or zinc.

At the same time constitutional treatment must not be neglected, and the patient must be kept upon quinine, and perhaps in certain cases, combined with iron, while his food must be of the most nourishing quality, composed largely of beef-steak, eggs and milk.

The occasional endurance of the system, and its ability to withstand a serious drain of this kind, is well illustrated by a case we had in the hospital some three or four years since, and who had remained so long that he became known to several successive classes. In him the empyema was the result of a stab under the left clavicle, which penetrated the lung. There was apparently a considerable quantity of pus, as the result of the pleurisy which immediately followed the wound, but the accumulation seemed to be confined to the lower two-thirds of the thorax, by adhesions, which had formed about the upper portion of the sack. One attempt was made to withdraw the pus by "aspiration," but unsuccessfully, as the needle seemed to have passed through bands of adhesive membrane and into the substance of the lung. Although no appreciable damage was done, the patient refused absolutely to allow another puncture to be made. The pus finally made its way through the lung and was expectorated in large quantities daily. It became horribly offensive and rendered the patient a nuisance to himself as well as to those about him.

Notwithstanding this constant and large discharge of pus, which continued for many months, and until the patient left the hospital and was lost sight of, he retained a fair amount of health and strength, and his appetite continued good. He could, from time to time, according to the varying amount of fluid in the chest, produce at will, a distinct gurgling sound, which could be heard at the distance of several feet, by simply bending the trunk forward, while standing, at right angles to the limbs, and then very suddenly resuming the erect posture, a sort of auto-succussion, which he came to regard as an accomplishment and which he delighted to practice for our edification.

CASES FROM PRACTICE.

COPIOUS INJECTIONS OF WATER IN THE TREATMENT OF DYSENTERY.

By Alex'r B. Shaw, M. D., St. Louis.

On the third day of last July, the writer saw in consultation, Mrs. R., who had been bedridden with dysentery for six weeks. Without giving any detailed statement in relation to the symptoms, suffice it to say that the patient was very much emaciated, and so prostrated that she seemed almost moribund. She could not speak above a whisper; the dejections were involuntary, and the stomach was so irritable that even a spoonful of water would be instantly ejected. Under whisky, quinine and beef-essence per rectum, she gained strength for three days, but notwithstanding the fact that she received a teaspoonful of laudanum in a starch clyster every hour, she (after having so far rallied as to call for the bed-pan) continued to deficate from eighteen to twenty times in twenty-four hours.

On the 6th, she began to experience agonizing pain all over the abdomen. Her outcry was continuous and her facies denoted intense suffering.

The whole abdomen was tender to touch, but the tenderness existed to an extreme degree in the region of the ilio-cœcal valve. During the night the pain became paroxysmal, recurring about every twenty minutes and accompanied by severe tenesmus.

The irritability of the stomach having ceased, her regular attendant hoping to relieve her pain, administered teaspoonful doses of laudanum, every two hours, alternated with ⅛ grain of morphine, all night, without appreciable effect.

I saw her again the morning of the 7th, when, from the character of the abdominal pain, tenesmus and dejections, the latter for eighteen hours having been nothing but blood with a slight admixture of mucus, I feared that intersusseption had occurred, and suggested thorough distention of the bowel, by means of an injection of warm water.

Her family physician administered the enema himself, and assured me that he had succeeded in introducing and causing to be retained for five minutes, a little more than two quarts.

The extrusion of this water was neither accompanied nor followed by tenesmus, and the patient immediately passed into a quiet sleep of over an hour's duration, but shortly after waking the tormina and tenesmus returned.

Three hours after the preceding visit, we saw her again, and concluded to desist from any further use of opium, to introduce the largest possible quantity of warm water, slightly tinctured with common salt, into the bowel every two hours, (three and a half quarts were injected at the third trial), and give beef-essence and whisky by the mouth. In seven or eight hours the tenesmus and tormina had almost entirely ceased.

After twenty-four hours of this treatment the temperature of the injections was gradually reduced, until in eighteen hours more, the water as it flowed from the hydrant was used. These cold-water enemas were continued until the 11th, when an interval of four hours between injections was ordered, and the salt was omitted.

By this time, the character of the stools had so changed that they were no longer dysenteric, but diarrhœal; the tenderness so particularly marked in the region of the ilio-cœcal valve and all along the course of the colon, had entirely disappeared, and the appetite was craving.

On the 16th, the lady was able to sit in a chair for an hour, without any great sense of fatigue. The enemas having been omitted during the night, the fæces passed the next morning were shaped, and quite natural in color.

From this time to the 21st, injections were made every six hours during the day, and omitted at night. On the 21st, the enemas were discontinued. About one week subsequently, after a rather free indulgence in apples and plums, there was a return of dysenteric stools, but they were rendered diarrhœal in twelve hours, by enemas of cold water, repeated every two hours. Under their continuance this relapse was completely relieved in thirty-six hours. Some few days after this, the patient had a violent attack of pleurisy, from which she made a good recovery.

I feel considerable hesitancy in thus reporting the result of treatment in *but a single case*, but the immediate effect of these

copious and frequently repeated injections was so *markedly* beneficial that I am deeply impressed with the belief that many cases, intractable under other plans of treatment, may be materially benefitted, if not cured, by their use; and I trust that this brief paper may induce others to resort to this procedure, in the treatment of dysentery, and test its efficacy.

Theoretically, this measure recommends itself, as fully meeting almost every indication for cure, presented in dysentery (colitis), non-malarial in its origin, and is applicable for the relief of many of the distressing symptoms occurring in severe cases of malarial colitis. * * * * * * *

Let us for a moment glance at the pathological conditions with which we have to deal.

According to Green, the inflammatory processes occurring in the intestine in dysentery, are for the most part limited to the large intestine, although the ileum is occasionally involved. The inflammation is always most marked in the rectum and descending colon, and it may be stated generally, that it is characterised by the ulceration and sloughing of the membrane to which it gives rise. The intestinal changes vary considerably, according to the intensity of the inflammatory process. In the milder forms of the disease, the changes are most marked on the summits of the folds of the mucous membrane. These are found covered with a greyish-white layer of fibrinous material, which when scraped off, leaves a superficial loss of substance. The mucous membrane generally, is hyperæmic and softened. The sub-mucous tissue is also infiltrated with inflammatory products, and the solitary glands are enlarged and prominent. When the process is more severe, the sub-mucous tissue becomes more extensively involved and the superficial layer of fibrinous material extends over wider areas, and implicates more deeply the mucous membrane. The thickening of the interstitial wall however, is much greater in some parts than in others, so that projections are produced upon the inner surface of the intestine, corresponding with those parts which are the most affected. The enlarged solitary glands usually slough, and so give rise to circular ulcers, which rapidly increase. When the process has reached this stage, the muscular and serous coats are implicated, the latter being covered with layers of fibrin, which form adhesions with adjacent parts. The intestine is much dilated, and contains blood and disintegrating, inflamma-

tory products. In the most intense forms of the disease, the necrosis is more extensive. According to Rokitansky, large portions of the mucous membrane are converted into black, rotten sloughs. The sub-mucous tissue is infiltrated with dark blood and serum, and subsequently becomes the seat of reactive suppurative inflamation, by means of which the necrosed portions of tissue are removed.

Shortly after or coincident with the beginning of the inflammatory process, the mucous membrane gets pulpy and secretes a large quantity of mucus, and bleeds under any irritation. Dr. Parks considers that ulceration is always present, but Dr. Habershon thinks it probable that in severe examples the membrane rapidly sloughs without antecedent ulceration. In some instances, after the disease has lasted a week or more, the membrane is studded with a multitude of small ulcerations, the orifices of an equal number of abscesses, situated in the sub-mucous tissue, and pouring out purulent material in considerable quantity, or again we may find gangrenous sloughs completely detached and mixed with a black, bloody matter.

Enemas used as indicated above, distending to their utmost capacity the rectum and colon, and probably serving as a lavatory to a portion of the small intestine also, softens, removes and prevents the further formation of scybala, and without doing violence to the mucous membrane, remove all pus and abnormal mucoid material as soon as formed, thereby lessening the liability to sequellæ, originating in the absorption of septic matter.

Again, pressure from within, as the gut is thoroughly distended, favors the circulation in the rectal veins, and by osmosis the engorged capillaries are unloaded.

By thus removing these sources of irritation, they facilitate the reparative process by diminishing congestion through a removal of its causes, and, as a necessary result, the inflammation subsides.

Under copious and frequently repeated injections the not only distressing but really injurious frequent calls to stool, tormina and tenesmus, so universally present, rapidly cease.

So great was the sense of relief experienced in this respect in the case reported, that, although the anus was greatly excoriated, and so sensitive that the introduction of the nozzle of the syringe was excessively painful, yet the patient, through

fear that the tenesmus would return, frequently requested another enema before the appointed time for its administration had arrived.

As previously stated, after the first day and night of this enema treatment had elapsed, the temperature of the injections was reduced from about 120° F. to 65° or 70° F. in eighteen hours. This was done with the expectation of exercising an antiphlogistic and sedative influence, analogous to that produced by frequent applications of cold water to inflammations superficially situated.

I would further suggest this measure as one promising good results in the treatment of ilio colitis and catarrh of the large intestines in children, for I think it highly probable that in ilio colitis the condition of the valve is frequently such as would readily allow regurgitation when the colon is distended to its utmost limit.

Assuming that, in the normal condition the ilio cæcal valve prevents reflex into the ilium, does it do so in diseases affecting its structure? May not one or both of its segments be so altered from congestion or inflammatory process as to prevent the complete closure of the orifice, and permit a lavement of the ilium.

In the October number of the *Virginia Medical Monthly* is a synopsis of a paper by Robert Battey, M. D., of Rome, Ga., in which he claims to have established the permeability of the entire alimentary canal by enema. After citing five cases in which the fluid introduced per anum was vomited, and detailing an experiment on the cadaver, made with the assistance of Prof. J. T. Johnson, of the Atlanta Medical College, in which water forced into the rectum was made to pass readily along the entire length of the gastro-intestinal canal, and flowed freely out of the mouth onto the table, asserts that when the colon is moderately distended the mechanical force is exerted chiefly in a lateral direction—*i. e.*, in the direction of the circumference of the tube, and its effect is to elongate the folds which form the valves to approximate closely their margins, to close the valve, and hence to offer an effective barrier to the course of the liquid. *But*, when the force is still further increased until the point of complete circular dilatation has been reached, another mechanical effect begins to show itself, viz: elongation of the intestine by a downward movement of the cæcum before

the advancing column of liquid. In this elongation of the tube the force exerted upon the ilio-cœcal folds is in a direction longitudinal with the intestine, and hence transverse to the folds by which the latter are separated from each other, and the ilio-cœcal valve is opened for the onward passage of the liquids into the ilium, and the obstacle is effectually overcome. In other words, the elongation of the intestine stretches the longitudinal muscular fibres, and produces, in a degree, the effect described by Gray, as following upon the division of those fibres.

In the *American Journal of Medical Sciences* for July, 1878, Dr. J. B. Messemer contributes an original article on cold water enemata in the treatment of chronic diarrhœa, wherein he claims to have derived great benefit from their use. His method was to inject one quart of water (in divided portions) after every passage, and assist the extrusion of the water by pressure over the hypogastrium. In his closing remarks the writer says: "The idea of treating chronic diarrhœa with injections suggested itself to me after I had treated some cases of dysentery. The tormina and tenesmus accompanying dysentery I have treated by injections of cold water and opium, and cold water alone. In my opinion, these injections relieved the tenesmus and tormina, as it washed out the irritating substances, and thus cleansed the rectum and lessened its irritability." From the writer's language I infer that the injections he alludes to in the treatment of dysentery were but small, and used for their local effect upon the rectum. Prof. P. G. Robinson, of this city, in his lectures on dysentery, frequently alludes to, and lays considerable stress upon the efficacy of these, so to speak, *rectal* enemata of cold water alone, or holding in solution morphia or some other anodyne agents.

During the treatment, and for some time after the recovery of the case reported, I believed that the use of copious distensive injections was not only original with me, but that I should have the pleasure of introducing the procedure as something new in our *armamentum medicorum*. But I find something very nearly the same in the Indian Ann. of Med. Sci. I., p. 486, where what is called Dr. Hare's plan of treatment of *acute and sub-acute dysentery* is detailed, which consisted in the main of first throwing into the transverse colon by means of a flexible tube of a stomach-pump large enemata of warm water, or milk and water (three

to six pints), so as to throroughly break down and bring away fæcal accumulations, and then follow them up with enemata of from two and one-half to three pints of distilled water, holding in solution fifteen grains of nitrate of silver. The solution thus applied directly to the ulcerated surface of the colon and lower intestine, was considered to hasten the curative process. The employment of large enemas in the treatment of dysentery was first suggested by Dr. O'Beirne in 1833, in his "New Views on Defecation," etc. He advocated the introduction of from four to six pints, which is nearly as much as was used in the foregoing case. So, after all, here is another verification of the wisdom of him who said, "There is nothing new under the sun."

NOTE.

[Since the above was written, Dr. Shaw has reported to us three additional cases of chronic dysentery, treated after the manner detailed above, and with the same gratifying results. —Ed.]

Treatment of Dysentery by Injections of a Solution of Chloral.—In the case of a child of eleven, who suffered with thirst, pain, tenesmus, and had twenty-five to thirty dejections in twenty-four hours, 5 gr. of chloral hydrate in 2 oz. of starch gruel were thrown up the bowels with considerable force, from a hard rubber syringe. The injection remained three hours, during which time the child slept. Many of the other symptoms were modified, and the injection was repeated, remaining seven hours, and then came away with some fœcal matter, but without tenesmus. Four enemas were given, in all, and treatment was discontinued in forty-eight hours. It was also tried in the case of a lady, aged twenty-five, using ten grains instead of five, and securing complete repose for eight hours, although she had previously had twenty to thirty movements in twenty-four consecutive hours. In conclusion: "The number of aggravated cases of dysentery we have treated with chloral hydrate warrants us in the assertion that, if early and promptly used, it is *almost* a specific.—[Dr. Newell, in the *Med. Times*.

REPORTS ON PROGRESS OF MEDICINE.

DISEASES OF CHILDREN.

By G. A. Moses, M. D., St. Louis.

Summer Diarrhœa.

Dr. William Johnston[1] has made most valuable observations regarding the nature, cause and treatment of the summer diarrhœa to which infants are especially prone, and which our urban statistics of infantile mortality exhibit during the hot seasons, as the chief cause of a very large proportion of deaths.

While the author finds the disease quite as frequent among adults, it seems to be much less severe, and almost or quite free from fever, while in infants a persistently high temperature is a marked feature. The rectal temperature of thirty-three cases taken as they presented themselves, varied from 99° to 103.8° F. and two-thirds were over 100° F.; while in adults the highest degree was 99.8° in one instance, and even this increase was only fugitive, the normal being soon regained.

The contagiousness of the disease is also upheld, and the observer cites himself, as suffering from five different attacks of diarrhœa, occasioned by examination of the ejecta from infants. The microscopic appearance of the discharges, furnish very striking evidence as to the probability and means of contagion, *i. e.*, the liquid portion of freshly discharged stools were always found to contain "innumerable bacteria," of two genera. "(*a*). Minute, glistening, single spherules of micrococcus, in active jostling movement; and (*b*), numerous rods of bacterium termo, some in a resting condition, but the great majority in rapid swimming and tumbling motion."

In health, these were never found. These organisms were also found in the vomited matter of seventeen breast-fed infants suffering from summer complaint, of a grave form, three terminating fatally.

1. *London Lancet*. American reprint, December, 1878.

It is well established, that the country is usually free from the prevalence of this city scourge, and that in cities it is among the poor, crowded in filthy, ill-ventilated, imperfectly sewered tenements, that the disease finds chiefly victims; but under most favorable circumstances of cleanliness and care, the disease occurs, and in most fatal forms, so that some other cause was to be looked for, and Dr. Johnston is convinced that he has discovered this in sewer gas, which escapes through poorly ventilated and ill-constructed sewers. The temperature of sewers not very thoroughly ventilated, was found during the summer months to be constantly above 56°, and reached 69° F. At these temperatures, putrid fermentation was constant, and the moist air was found teeming with the very forms of bacteria which were contained in the intestinal discharges. The same were found in the confined air of cess-pools, in the trapping water which is intended to shut off the sewer gas from access to houses; and during hot, dry weather, the moisture which is carried off from liquids by evaporation, carries with it these microscopic elements of disease. The juices of over-ripe fruit exposed in shops, or sold in the streets of districts affected by this empoisoned atmosphere, were also found to contain numbers of these bacteria, in addition to the cells peculiar to the ordinary fruit ferment, *saccharomyces exiguns.*

The strongest evidence adduced in favor of the putrefactive nature of the disease, is offered by the result of treatment, which consisted of antiseptics, either alone or combined with astringents.

Carbolic acid, quinine, salicylic acid, dilute sulphuric acid, thymol, benzoic acid, and borax are amongst the remedies which Dr. Johnston found most beneficial.

Rudolph Ravenburg (*Medical Record*, vol. 14, p. 4), recommends the use of a solution of mercuric chloride, (corrosive sublimate) in proportion of one grain to twelve ounces of distilled water; one teaspoonful of the solution to be mixed with a teacupful of milk which has been previously heated to 150°F. This to be given in proportion to the age and condition of the child. In ordinary cases, the writer says, that within twenty four hours the character of the fecal discharges will be changed, and a few days suffice to completely cure; in severe cases, the solution proves most serviceable as an enema, being diluted in water that has been previously boiled. The mode of action is asserted to be the same as carbolic acid, etc., *i. e.* as a bacteri-

cide and anti-ferment. Dr. Ravenburg having observed analogous microscopic evidences of the presence of bacteria in the stools, the disappearance of which under the use of the very dilute solutions preceded the cure. Very valuable advise is also given as to the method of preserving milk to be used for infant's food. This should never be kept in refrigerators or cupboards, but in the open air, simply covered by a cloth, and should, especially in summer, be always submitted to a sufficient degree of heat, say 150° F., for a moderate time, and cooled immediately before administration; thus, although the presence of infusorial and bacterial spores may not be entirely prevented, they may be, as proven by experiments of Tyndall and others, completely sterilized by the simple application of a proper degree of heat.

Dr. A. Ernest Sansom, in an instructive paper read before the Hunterian Society, (*Obst. Jr.*, G. B. & I., Dec., 1878), urges the importance in nurslings, if affected with diarrhœa, of first attending to the condition and dietary of the mother; and while he admits the possibility of infection as an occasional cause of the complaint, asserts that many observers have found bacteria in intestinal dejecta during health; he attributes a large number of such cases to reflex causes acting upon the nervous system, among which he recalls the attention to dentition, which many pathologists of the present day are disposed to discard as an origin of morbid effects.

Pleurisy.

Dr. S. Henry Dessau, New York, directs attention to the fact, that the occurrence of pleurisy in young children, is frequently overlooked or misinterpreted. It may be confounded with a variety of conditions, particularly if it affect the diaphragm, when it is mistaken for intestinal irritation or peritonitis. These mistakes are attributed to carelessness in the method of examination, or to want of proper appreciation of the signs and symptoms of the disease,—which may occur idiopathically, or as a sequel to pneumonia, or the exanthemata. The auscultatory and physical signs vary but little from those found in the adult; pain is frequently referred by motion or speech to the abdomen; if the right side be affected, there may be vomiting of bilious matter and purging; the tenderness of the chest-walls is elicited in infants by lifting them up, in older children by percussion.

The auscultatory signs are all altered by change of position. "When effusion has occurred, dullness is complete and *extends to the front.*"

The disease with which pleurisy may be most easily confounded, is croupous pneumonia. The general symptoms of the former are mild as compared with the latter, in which the dullness is incomplete and *confined to the back.* In pneumonia, the crepitant ronchus is fine and heard at the end of inspiration, and never over the same spot when there is tubular breathing. In pleurisy, the crepitant ronchus is coarser, and may be heard over the same spot where tubular breathing exists. There is no alteration of the physical signs, on change of position in pneumonia, which occurs in pleurisy.

When doubt exists in regard to the diagnosis, an exploration with the needle of an hypodermic syringe may be safely made, and repeated if necessary.

In proof of the importance of directing attention to the diagnosis of this condition, we find in the transactions of the Obstetrical Society of Philadelphia, reported in the *American Journal of Obstetrics*, January, 1879, a case detailed by Dr. Jas. Walker, in which the diagnosis of lobular pneumonia was made; the patient, an infant 9 months of age died, and the autopsy revealed the fact that the pleural surfaces of the left side were firmly bound together by recently deposited plastic lymph, the pneumonia existed but the extensive pleurisy had been overlooked.

Tracheotomy in Membranous Laryngitis.

Mr. Robert Parker, in a paper read at a late meeting of the Royal Medical and Chirurgical Society, ably urges the importance of the early adoption of this operation in severe cases of croup, agreeing with Dr. West, that the recession of the chest-wall is a more important indication for tracheotomy than the cough, which in the most urgent cases is often quite abolished. He advocates the use of chloroform anasthesia, during the operation, and the use of a tracheal dilator in preference to the immediate introduction of the canula; he urges as a matter of *routine in every case*, that the trachea and glottis be thoroughly cleared of all foreign matters, whether membrane or mucus, before the introduction of the tube, for which purpose he prefers a feather. The use of steam, which may be medicated, is necessary in proportion to the dryness of the passages; as a

solvent, to assist removal and prevent the formation of membrane, he recommends soda as the best; this may be used in solution, ten or twenty grains to the ounce of water, and sprayed into the throat from time to time.—*Monthly Abstract of Medical Sciences. January*, 1879. *Lancet.*

Atropia in Croup.

The sulphate of atropia in a one per-ct. solution has been used with success in the treatment of a case of croup which threatened a fatal termination. Dr. De Poutènes, of Antibes, reports in *L'Union Medicale*, that in the third day of the attack, death seemed inevitable, medication having failed of benefit; the epigastrium was retracted, the face and neck swollen and purple; three drops of the solution was injected on the left side of the neck, on a level with the pneumogastric; although there was in a few minutes improvement, in four hours the dose was repeated, amelioration was decided, and in a few days recovery was complete. The suggestion is a valuable one, in such cases as are threatening suffocation from other causes than exudation, and which are accompanied by congestion and œdema, resulting perhaps from, or associated with, more or less paralysis of the pneumogastric, to which nerve, belladonna is a special excitant.—*Am. J'l of Med. Sc., and Dublin J'l Med. Sc., Jan'y*, 1879.

"*Aural Inflammations with Exanthemata,*"

Is the subject of a brief but important essay read by Dr. H. N. Spencer, (St. Louis), at the last meeting of the American Otological Society. He disputes the theory that under such circumstances the inflammation is specific; there is no pathognomonic mark, by which to decide between other inflammations affecting the middle ear, and those resulting from the exanthemata; nor does the course differ from inflammations arising under other circumstances, and resulting in purulent otitis mediâ. He urges the necessity of prompt action in the treatment of the aural complications, at the outset, both preventive and curative, which he had more fully detailed in a paper published in the Transactions of the Medical Association of the State of Missouri, 1878. Prevention, consisting in careful treatment of the pharyngeal inflammation which is the starting point of the aural. In event that this fails or has been neglected, the treatment should be, in the first stage of tympanic inflammation, depletion, either by knife within the meatus, or by leeches on the inner

side of the tragus—or if the condition of the patient forbid depletion, warm fomentations. Politzerization will often relieve the pain at this stage, but in the second stage, that of exudation, when the tympanum is bulged out by fluid behind it, paracentesis is indicated, both to relieve pain and avoid the inevitable rupture by ulceration, which may occasion irremediable destruction.

Ligation of Umbilical Cord.

Prof. Zweifel, (Erlangen), read before the German Gynecological Society at its recent meeting, a paper on this subject, advocating the postponement of ligation until after the expulsion of the placenta, which should be compressed with both hands, and as much blood as possible squeezed from it and the cord, before the application of the ligature. As a result of such practice in his clinic, he finds that by reason of the increased amount of blood, the children thrived better, showing less decrease in weight than usually occurs during the first few weeks of extra-uterine life. Hofmein, of Berlin, reports to the same effect.

At the same meeting, Schwartz, (Göttingen), reported a case of ovarian tumor in a child of four years. The external genitals were not hirsute, but thick and swollen—the uterus like that of a girl of 20 years; precocious menstruation existed. The abdomen measured 83 centimeters in circumference. Ovariotomy according to Lister. The short, thick pedicle was tied in three portions and dropped. The case recovered.—*Am. J'l Obst., Jan'y*, 1879.

Nitrite of Amyl and Morphia in Convulsions.

Dr. Hays, (Engel), relates important results from the use of morphia, subcutaneously, in conjunction with inhalation of nitrite of amyle, in extreme cases of infantile eclampsia. The indications for the use of these remedies being decided paleness of surface, showing an almost tetanic contraction of the arterioles. The amount of amyl inhaled in the severest case, was five drops, administered immediately after the hypodermic use of ¼ gr. morphia. The patient was eighteen months old, and subject to severe convulsions, of which three children of the same family had died. This addition to therapeusis in these terrible cases, promises to be most valuable.—*Phila. Med. Times, Jan'y*, 1879.

REPORT ON PROGRESS OF KIDNEY DISEASES.

By John Bryson, M. D.

(Continued.)

Bright's Disease.

Dr. Richard Thoma, of Heidelberg, has recently communicated a series of investigations, made by him, on the changes in the circulatory apparatus of granular or contracting kidneys. The first experiments relate to the relative permeability of the renal vessels, under constant pressure in this disease, as estimated from the outflow from the renal veins, comparing this with the same as observed in healthy organs, the comparison being made under equal conditions of age. The result is to show that, not only is the actual quantity that can be passed through the organ, in a given time, very largely reduced, as was before known, but the proportion of the amount passing out by the renal vein, to that introduced by the renal artery, is much less than in healthy organs. He asks, is this due to the compression on the vessels by the new growth, or is it to be explained by the greater outflow through the walls of the vessels into the tubules?

His next observations were, to make very careful examinations of the weight of the kidneys at each period of life, and to measure with great accuracy the sectional area of the renal artery. He also calculated the volume of fluid which can pass through the kidney in a given time, at different ages, from three to twenty-seven years, showing that it increases with the growth of the organ.

The sectional area of the renal artery in granular kidney is, according to him, very slightly smaller than in healthy subjects of the same age; but, relatively to the weight of the organ, it is from one-fifth larger to nearly twice as large. The intertubular arteries, the vasa afferentia and the glomeruli are all absolutely larger.

By both series of experiments he found that the rapidity of the flow of fluid in the renal arteries of granular kidneys was not half, often not a fourth, of what it is in the renal arteries of healthy kidneys. He also shows, by a large number of obser-

vations, that the transverse section of the renal artery grows wider as the organ undergoes development, and proportionately to the weight of the kidney; further, that the peripheral resistance to the entering fluid grows relatively less; so that a greater quantity of blood passes in a given time through the organ.

By careful comparison of the effects of colored injections on sound and on granular kidneys, he found that the latter permitted the fluid to pass through the walls of the blood vessels with much greater ease, and not fluid, only, but gelatine, prussian blue, chloride of sodium, and even solid grains of cinnabar, and this without rupture of the coats of the vessels. This happened, not on those parts that showed most connective-tissue growth, but in the vessels still otherwise apparently healthy. Careful injections proved, too, that the capillary network in granular kidneys was very scanty, and that, in many cases, the vasa afferentia anastomosed directly with the efferent vessels, being cut off from the glomerulus by the growth of fibrous tissue.

In spite of the fibroid growth of the intima, the lumina of the vessels are not smaller than normal; only exceptionally, when the endarteritis has reached a high grade, does this take place. He regards these changes as connected with the endarterial processes—described by Köster, Friedländer, Trompetter and others—as taking place in almost all new formations of connective tissue, as they bear a distinct relation to the amount of interstitial growth.

These facts are especially opposed to Gull and Sutton's theory, that the narrowing of the lumina of the vessels by the new growth causes the obstruction to the circulation; they agree with independent observations that, as a rule, the vessels of granular kidneys are certainly not of less calibre than normal; they prove that the anatomical condition of the organ itself, independent of any vital changes, such as arterial contraction, causes a great increase to the resistance to the circulation through it; they explain the clinical phenomena of polyuria and albuminuria, by the increased permeability of the vascular walls.

The connection between cardiac hypertrophy and renal disease is the subject of a recent paper by Prof. Senator, of Berlin. He regards the cardiac hypertrophy of uncomplicated cirrhotic kidney as usually unaccompanied by dilatation; the

latter being, according to him, most commonly associated with parenchymatous degeneration, primary or supervening on the cirrhotic process. This statement, unsupported by any new evidence, enables him to construct a double theory to account for the cardiac changes in renal disease. He considers them apart: first, the dilated and hypertrophied heart of parenchymatous nephritis; secondly, the concentrically hypertrophied heart of interstitial nephritis. The first he explains by adopting the hypothesis of Bright, that it is due to the difficulty met with by the heart in driving the blood, overloaded with urinary excreta, through the capillaries, and appeals to the analysis of Bright, Christison, Bartels and others, to prove that this state of the blood is present. Finally, thickening of the minute arterioles has not been found [Ewald] in simple parenchymatous nephritis.

In interstitial nephritis, he regards the thickening of the small vessels as the *cause* of the increased aortic tension; but he believes that the concentric hypertrophy, often present, is not due, and cannot be ascribed to obstruction to the discharge of the ventricle, but is rather a concomitant of the renal disease, possibly due to some nervous influence, as in Grave's disease, possibly to some direct effect of the blood. He does not pretend to decide what the nature of the arterial change is, or by what it is determined; but he is convinced that "all hypotheses which have the kidney affection for their starting-point are useless."

Dr. Hanat, in a recent communication, discussing these very points, says: "I have long observed that this hypertrophy frequently coincides with a notable decrease in the size of the ventricular cavity. I believed, at first, that this was merely a coincidence; but I resolved to examine the subject with more attention." As a result of this attention, he gives notes of two cases, which he has had an opportunity of observing. This observation is not by any means new; Bamberger, Gowers, Moore, have pointed out the same thing. Hanat thinks it supports Johnson's view of muscular hypertrophy and tonic spasm; the condition of the heart being similar to that of the arterioles. Senator regards it as being, of necessity, idiopathic, and tries to avoid the fact that it is not uncommon to find little or no dilatation in cases of aortic insufficiency, in which no one doubts the deuteropathic nature of the charge by saying that Bamber-

ger hinted that, in such cases (of aortic insufficiency) room is gained by the left ventricle bulging into the right.

Hanat's remark and Senator's conclusion seem to be both contradicted by the actual observations of Thoma (*ride supra*).

Dr. Von Buhl, of Munich, discusses the same points. He argues against the views of Gull and Sutton, especially urging the rarity with which other organs but the kidneys take part in this supposed degenerative process. He thinks that the heart and kidneys simply become diseased together, and refers to the very large percentage of cases in which inflammatory affections of the heart are found. He thinks this endocarditis is followed by hypertrophy, as the result of "over-nutrition" and increased work, and draws attention to the new fact that narrowing of the aorta is sometimes present. This last, and the cardiac hypertrophy, account for the increased tension. Everybody admits the frequency of the cardiac complications, but no one now doubts the existence of a number of cases where the state of the heart cannot be regarded as in any respect the result of inflammatory changes.

On the question of the size of the aorta, more information is wanted.

In twelve cases of nephritic disease, M. Dieulafoy met with two instances of complete deafness, three of half deafness and two of disturbances of other kinds, tinnitus, etc. In some cases there was also more or less pain in the ear. In one there was perforation of the tympanic membrane. He does not look upon these cases of disturbance about the ear, in Bright's disease, as accidental; but regards them as due to œdematous, chronically infiltrating, or hæmorrhagic changes in the tympanic cavity and membrane.

In regard to *treatment*, jaborandi is at present the popular drug. It is used in uræmia, and in chronic and acute parenchymatous nephritis, and is said to have accomplished especially good results at Bellevue Hospital.

In uræmia, it is a very effective substitute for the old hot-air bath, acting more quickly and surely. It is used to relieve uræmia, on the grounds that it promotes excretion of urea through the skin; but, as it is by no means certain that the so-called uræmic phenomena observed in renal disease are due to the presence of urea in the blood, and, as in all the cases reported it had a marked influence in lessening the quantity of

albumen in the urine, it is possible that the theory on which it is given is false; but the practice is, nevertheless, good, as the result shows.

It is not to be used without care, however. It weakens the heart, and is dangerous when the pulse is poor and the system debilitated. If given to a patient in this condition with uræmia, he falls into a cold sweat, and œdema of the lungs, coma and death follow. When given in cases of pleuritic effusion, it does not seem to sweat out the intra-thoracic fluid, but produces nausea and salivation, not at all pleasant.

The dose has to be increased sometimes, as the drug loses its effects. Sometimes it causes salivation, only, but usually diaphoresis, also. The bad effects can be avoided somewhat by a careful graduation of the dose. The urine is, in cases of chronic Bright's disease, where no acute trouble complicates it, somewhat lessened in amount. Jaborandi has proved, so far, of most use in chronic Bright's disease, and in the uræmia brought on during its initial attacks, and may be useful, but is dangerous, where any acute renal disorder complicates the chronic, or when the system is weak and anæmic.

(To be concluded.)

Acute Nephritis.—J. H., *æt.* 29. Three weeks ago, after exposure to cold, was taken with rigor, followed by fever, pain in region of kidneys, and violent emesis. Had constant desire to urinate; able to pass but few drops at a time. At present, face and limbs greatly swollen (œdematous); urine small in quantity, light in color; sp. gr. 1009, by heat and acid coagulates one-half; contains epithelium from tubes and passages, and epithelial and bloody casts. Lungs œdematous. At 7 P. M. was given 15 minims fld ext. jamborandi; at 8 P. M., a second dose; soon after perspired freely, and saliva escaped continuously. Following day, better; jamborandi repeated in evening, with dry cups over kidneys and lungs. Third day, the same. Fourth day, œdema disappeared; stopped jamborandi. Sixth and seventh days, slight œdema; jamborandi repeated in fifteen and sixty minim doses, but no perspiration produced—only salivation. Urine, sp. gr. 1012; albumen, one-fourth. Ordered mixture of tr. digital, Pot cit., and Buchu. Four days after, discharged; entirely recovered.—*Medical and Surgical Reporter.*

TRANSLATIONS.

EXCISION OF THE ENTIRE SCAPULA, TOGETHER WITH REMOVAL OF THE HEAD OF THE HUMERUS.

By Dr. W. Ortowski, in Warschau.

G. D., æt. 25, declares that in September, 1876, he suddenly, without any apparent cause, felt severe pain in the left shoulder joint, which radiated over the entire region of the scapula. In the hospital at Bialystock, several incisions were made in this region, and a considerable quantity of pus was discharged. Notwithstanding these, however, the local trouble increased, and the general condition became rapidly and visibly affected by profuse suppuration. When Dr. O. first saw the patient, he found the volume of the left shoulder joint much increased, and the head of the humerus displaced downward. Distinct fluctuation was not well made out, owing to the swelling of the soft parts. Over the spina scapula and about it were several flat ulcers, as large as the palm of the hand, the edges of which were undermined, and consisted of thin, red, glistening skin; at the bottom of these ulcers were several fistulæ, with ulcerated edges, through which the probe reached denuded and partially destroyed bone. The entire scapular region was much swollen, and pressure discharged a considerable quantity of thin, fetid pus through the fistulæ. Active motion of the arm was impossible, and passive motion incomplete and very painful. Examination of the urine gave no evidence of albumen. The author believes that the scapula was affected primarily (periostitis maligna suppurativa), and that the shoulder-joint became involved secondarily. The diagnosis was rapidly made: Caries necrotica scapulæ, with suppurative inflammation of the shoulder-joint.

The extreme prostration of the patient forbade any surgical interference at the time, An antiseptic dressing was applied, the fistulæ and ulcers were kept scrupulously clean, and liberal diet and tonics ordered,

As fluctuation in the joint became distinct, an incision was made in the direction of the outer border of the pectoralis major. A large quantity of very offensive pus was discharged, the volume of the joint diminished, and the pain became less intense. Gradually the suppuration began to be more moderate, the diarrhœa ceased, the appetite began to return, and the general condition improved so much that, in a month more, Dr. O. determined to operate.

The patient, having been chloroformed—a performance requiring great care, owing to the extreme debility of the man—the first incision was made, beginning at the acromion, and carried along the spina scapulæ down to the bone; from the middle of this incision another was carried down to the angle of the scapula, the whole forming a T-shaped wound (Syme's method). The soft parts, the periosteum, and the muscular insertions were then detached from the upper surface of the bone with a raspatorium. The angle of the scapula was then raised, and, beginning at this point, the soft parts of the lower surface were detached in the same way. When the articular process was reached, Dr. O. found that the ligaments of the shoulder-joint were completely destroyed; the scapula separated very readily from the humerus, and the acromion from the clavicle; it was a little more difficult to detach the insertions of the muscles from the coracoid process. The scapula having thus been "pulled out" (it was subsequently found to be much thickened in some places and perforated in various places of the pars infraspinata), the wound was washed out, and the hæmorrhage checked, but two small vessels, requiring ligation (cat-gut). The head of the humerus was then carefully examined, and found to be denuded of its cartilage, and partially destroyed by caries; it was, therefore, removed at the surgical neck. A part of the edges of the wound, which appeared indurated and fatty, was removed by elliptical incisions about 8 centimeters in length. The wound was again washed out with carbolized water, the vertical incision was closed entirely, and the horizontal incision all but a small part, near the joint, with cat-gut sutures. Lister's dressing was then applied. The operation occupied half an hour. The patient was very feeble and very much excited; so that he had to be kept in bed by force. Six hours after the operation, secondary hæmorrhage occurred, and the Doctor was obliged to ligate a large branch of the subscapularis. In two

months the wound had healed, all but the fistulæ, one of which led from the posterior surface of the shoulder, on a level with the articular process, forward, downward and inward, to the incision referred to above; the other, beginning immediately behind the first, passed downward, and opened in the posterior portion of the axilla. Both fistulæ, into which drainage-tubes had been introduced, discharged considerable quantities of pus, and all attempts to heal them failed. The scar which resulted ulcerated in several places; these ulcerations healed readily, only to reappear in other places in a short time. A considerable portion of the scapula, especially the pars infra-spinata, was regenerated in about four months. Active motion in the left shoulder is impossible. Other surgeons, who have performed this operation, have no better results to boast of. The only case of complete recovery is that of *Syme* (1856). He first removed the head of the humerus for some neoplasm, and, when the growth returned, he excised the scapula, and part of the clavicle. *Heyfelder's* patient (1857), in whom the operation was performed for caries, died of exhaustion ten days after the operation. Other excisions of the scapula have resulted no better- Aside from the unfavorable condition of the wound, the dangers of which are moderated by Lister's dressing, the failure of the operation is due to the fact that we do not resort to it until the strength of the patient has failed too much to make recovery possible.—[*Cbl. f. Chir. Medicin. Chirurg Rundschau. Sept.*, 1878. E. E.

CONGENITAL DEFORMITY OF THE SUPERIOR EXTREMITY.

In the Vienna section of the Association of Physicians of Lower Austria, F. v. Becker presented two cases of congenital arrest of development. The patients, brother and sister, belong to a poor family. Father and mother are healthy; three children have died, and presented no abnormal development. Of the living children, one of them (a girl) is normally constituted; the other three are deformed, as described below:

The boy is well developed, but delicate, and badly nourished. Both superior extremities are very much shortened. On the

left side, this shortening is due to a total absence of the bones of the forearm. On the right side, it is due to shortening of the humerus, and to the fact that radius and ulna are merged in one bone of about one-third of the normal length. The shoulder joint is defective both in development, and in width. On the left side, the elbow joint is wanting; on the right side, its motion limited, reminding one of partial anchylosis. We find only rudiments of the meta-carpal bones of the thumbs, and these rudiments are firmly united to the first and second phalanx of the index finger.

In the girl, these deformities of the thumbs are less marked, and the superior extremities are of normal length.

In both children, especially in the boy, we find enormous enlargement of the heart dependent upon stenosis aortæ, easily recognized. We can not determine whether there is insufficiency, or not. Careful examination fails to reveal a radial pulse, and the absence of pulsation in the fossa clavicularis suggests the absence, or, at least, an abnormal course of the subclavia. Von Becker considers the abnormal condition of the heart, or, at least, the stenosis of the aorta as the primary affection, and that the arrest of development was due to an insufficient supply of blood to the affected organs during intra-uterine life. This explanation has already been accepted by various authors, but probably nowhere, in our literature, do we find examples that demonstrate this fact so plainly as the cases here presented.—[*Mittheilungen 'd Ver*, 14, 1, 1878. *Schmidt's Jahrb., Sept.* 1878.]

E. E.

ABSENCE OF THE RADIUS.

Dr. Julius Kaczander, of Budapest, reports the following deformity in a still-born child (male), almost at full time: The left forearm was very much shortened, the thumb of the left hand was wanting, and the hand itself fixed at right angles to the forearm.

At the lower end of the humerus, the external condyle is very prominent; there is no eminentia capitata; the trochlea is broad, and very shallow. The radius is wanting. In place of

the olecranon, we find a convex tubercle, and flexion of the ulna is very limited; the styloid process of the ulna is wanting. There is no scaphoid bone, no multangulum majus; the bones of the thumb are absent. The os lunatum is united with the ulna by means of a ligamentous mass, and a similar mass passes from the os triquetrum to the ulna.

The long head of the bicepo is missing, and we find no sulcus bicipitalis on the humerus for the reception of its tendon. The coraco-brachialis is poorly developed; the brachialis is very diminutive; the short head of the biceps unusually well developed. Anteriorly, at the bend of the elbow, a muscle passes from one condyle to the other, connected above with the brachialis, and below, with the extensor digitorum communis, and flexor digitorum sublimis.

The supinator longus and brevis, extensor radialis longus and brevis, and the indicator are wanting. Only one tendon of the extensor digitorum communis passes through the ligamentum carpidorsale. The ulnaris externus and internus, and the flexor digitorum sublimis and profundus are present, but the sublimis is very poorly developed. In place of the long dorsal muscles of the thumb, we find two muscles covered by the extensor digitorum communis, and the extensor digiti minimi, the upper one of which is inserted into the first phalanx of the index finger, and the lower one into the dorsal aponenrosis of the middle finger. Beneath these muscles, on the other side of the forearm, there are three other muscles, which have no counterpart in normal anatomy. The muscles of the thumb are wanting, and also the interosseus externus of the index finger.

As in other cases in which the radius was wanting, there were other deformities in other parts of the body. Notably, an incomplete development of the septum ventriculorum cardis; a slit in the left upper lip; an absence of the thumb of the right hand.—[*Virchow's Archiv.*, LXXI 4, p. 409–403, 1877. *Schmidt's Jahrbucker, Sept.*, 1878, p. 13.] E. E.

EDITORIAL.[1]

DR. A. J. STEELE, *Editor.* DR. W. A. HARDAWAY, *Associate Editor.*
PROF. E. W. SCHAUFFLER, M. D., *Corresponding Editor.*

"It is not so much what you ought to do, as what you ought to know not to do."—*Sir Benjamin Brodie, Lectures*, 1837.

"We are such stuff
As dreams are made of, and our little life
Is rounded by a sleep."

"Thou art not thyself;
For thou exist'st on many a thousand grains
That issue out of dust."

OF a truth, so far as the fulfillment of duty as a profession, both to itself and the public, the medical men of our State may, with humbled crests, acknowledge that, so far, its little life threatens to be only such stuff as dreams are made of, the sleep that should round it as the well-deserved rest overshadows it before the rest is won; and, if heredity be true in public bodies and masses, as Galton discovers it in individuals, the future generations promise little. We need an infusion of new blood; a fresh start must be made, and now is the time, this the very hour, for determination of a renewal of life, fresh protoplasm to be sent out through all the nutrient vessels of our body, that may be assimilable and assimilated, in order that renewed vigor may be imparted to the quiescent mass of doctors, and through them to the State at large.

We have thought constantly, since the last meeting of the State Association, of how much we owe ourselves and our fellow-citizens and our successors, and of how sadly deficient is our influence; and this ought not to be so. The clergy, the bar, and the mercantile bodies exert most powerful interests in the management, guidance and improvement of affairs, and, while this is just and proper,

1. This column open to contributors.

they often overstep the natural limits of their functions, and control public sentiment and public action, municipal and State government, in matters of which they are almost or entirely ignorant, oftentimes swayed by most absurd and unworthy prejudices. What do they know or what can they know of laws of hygiene, either as relates to individuals or communities? No man or woman trusts to their knowledge of law or religion for the preservation of purse or soul; but, as regards the deep mysteries of physiology, pathology and therapeutics, they assume to be a law unto themselves. Did each individual confine in practice, his or her impressions to his or her own welfare, we might not have the right to object, but when communities are affected, the matter assumes a different aspect. "The health of the people is the supreme law," and this should be, must be enforced.

We are in a condition to undertake the initiation of a movement that, if we commence in the right mode and unceasingly and unitedly endeavor to advance, will in time attain a force which I feel satisfied will overcome all the obstacles which now frown so threateningly in opposition —obstacles of custom, obstacles of ignorance, obstacles of prejudice, obstacles of intention.

We must "take up arms against this sea of troubles, and by opposing, end them."

In this journal we purpose that one of the chief departments shall be devoted to matters relating directly and practically to public hygiene, urging the importance of the formation of local societies and boards of health, and this department will give constantly the latest results of the effect of attention to local causes of disease in this and foreign countries, and, in connection with this, instructive essays—simple, so plain and easy, that he who runs may read and comprehend; often of so popular a character that the secular journals, the daily and weekly newspapers shall copy them, and so commence the education of all people who read. We feel sure they will be read.

Farmers and villagers are concerned in understanding

drainage, the neglect of which has wrought sad disaster in our country. A ditch is cheap, and ditches are cut on every farm, but they need to be cut intelligently, and every country doctor ought to be able to tell his patients where one is needed, and where it had best lead.

Wells are dug to form dépôts for drainage from cess-pools, when a little needed knowledge would as easily avoid the lurking danger, that is only concealed by ignorance.

Infected bedding and clothing have carried illness and death, by reason of expensive economy or death-dealing charity, because the infectiousness of filth or disease has been unknown, or the value of time as a purifier, ignorantly estimated to be great; and even in this city are found men and women, some unfortunately with the cacoethes scribendi, who make themselves heard, and exert baneful influence against the blessed protection of vaccination.

Oh! that we could vaccinate against willful ignorance.

The Medical Society of St. Louis, and the State Medical Association, must be gradually infected with the desire and determination to claim and exert the functions and powers that properly pertain to them; and although we may be obliged to begin very gradually and modestly, provided we work unceasingly, we can attain our ends. The first step, we believe, is to attract the general attention of the profession to the importance of strengthening the State Association, and its influence with county societies, and appointing for each county a select person, who is able and willing to make at each annual meeting, a report of the sanitary conditions and wants of his county. Thus we will at once unite many in the same labor.

Then a committee or council on public hygiene will result, and the legislators of each county, can in time, be influenced to pay some attention to the recommendations of the association; a wedge of influence, once inserted, it can be driven deep. But we will not prolong the question, which opens too large a volume. Our object now is, to start a ball in motion which we hope will roll up and on to gratifying success.

G. A. M.

CORRESPONDENCE.

FROM BOSTON.

Mr. Editor:—The present subject of interest in the medical community of this city is the medical library, and its removal to its new quarters.

Little more than three years old, it is already probably the third in size in the country, and a subject of pride to every one here who takes an interest either in medicine, or in libraries.

It originated in a little meeting held in the office of Dr. Bowditch, on December 21, 1874, "to discuss plans for a library." In August, 1875, the first general meeting was held, officers were chosen, and rooms hired. Books soon began to come in, and at the end of the first year there were 4,500 volumes. At the end of the second year, the library had 6,500 volumes, and had outgrown its first quarters, and must look about for new. These it obtained in a house on Boylston Place, a quiet locality and at the same time having the advantages of a central location and close proximity to the Public Library, which is always ready to place its stores of medical literature at the service of its former relative.

It by no means detracts from the enjoyment of the new house to know that it was the early residence of Dr. S. S. Howe, the philanthrophic superintendent of the Blind Asylum, well known as the teacher of Laura Bridgman, the blind deaf-mute.

The whole of the lower floor of the building has been thrown into a single room. Extended in the rear by a one-story addition, and its height increased by lowering the floor to the original level of the basement, it makes a hall sixty feet long—large enough to accommodate the medical societies of the city. The walls of this hall, from floor to ceiling, are covered with shelves for the reception of books. A light gallery, which runs round three sides of the hall, gives access to the higher shelves, and also increases its seating capacity. The books are protected by a netting, which allows all to be seen, but does not permit displacement by careless handlers. For society meetings, the hall

is entered at the level of the street; ordinarily, however, admittance to it is gained by a circular staircase, from above. Up one flight are the reading rooms. One of them contains the current numbers of the leading journals of this country and Europe. About one hundred and twenty journals are received here. A large proportion of them are regularly subscribed for; others are received less regularly, as contributions. In this room, which is practically the office of the library, and where the assistant librarian may always be found, are placed the dictionaries and encyclopœdias, as well as the more recent additions, which remain here for a time before taking their permanent places on the shelves, in the hall below.

The largest room on this floor is devoted to a duplicate library, and contains duplicates of the most important volumes, serials, and others, to be used as a loan library—the library proper to be used only for consultation. Thus, one can always be sure of finding any volume in the possession of the library, for consultation, even if some more fortunate member is already enjoying the duplicate copy more leisurely at his home.

Of the rooms above, one is to be occupied by the library of the Statistical Society; another is devoted to duplicates kept for exchange, and others are occupied by the assistant librarian.

The dedication of the building took place on December 3d, and proved a most enjoyable occasion. The walls were hung with portraits of deceased physicians, nearly one hundred portraits being loaned for the occasion. Dr. Oliver Wendell Holmes, who is the president of the Association, delivered an address, which was the chief feature of the evening. It was full of the good things which Dr. Holmes knows so well how to say. The temptation to repeat some of them is very great, but it is kinder to your readers to refer them to the *Boston Medical and Surgical Journal* for December 12th, where they will find the address in full. Dr. Billings, of the National Library, at Washington, was one of the speakers, and distinguished physicians of other places joined in the evening's entertainment.

Since the dedication, an occasional evening has been devoted to the history of the older physicians, whose faces looked down upon us from the walls. Dr. Edward Reynolds, who has reached the venerable age of eighty-six, and can recall the elder days of the practitioners of the revolution, has, on two occasions, given us some very interesting reminiscences of his early years.

The three principal medical societies already use the hall for their meetings, securing for themselves a pleasanter and better place of meeting than that previously occupied, and giving the Library Associations the benefit of their necessary expenditures.

The books thus far accumulated, are mostly voluntary gifts. The largest single contribution is the bequest of nearly one thousand volumes by Dr. Edward H Clarke, former professor of materia medica and therapeutics. They are devoted mainly to therapeutics and to the ear. Soon after the establishment of the Library, Dr. William Read deposited with it a valuable collection of books on midwifery, and diseases of women, which contained, with a few rare exceptions, every book published in the English language on that subject up to 1860. Other gifts, bequests, and permanent loans carry the number of volumes nearly, if not quite, to 10,000. The exact number cannot be known for some time yet, as the process of rearrangement and cataloguing, on the new shelves, is a gradual one, done as it is by volunteer labor. The greater part of the labor, of all sorts, connected with the Library, has been done by the members of the association, themselves.

For the first two years the expenses were kept at the lowest possible figure, the small deficiency above the fees of the members being made up by public-spirited individuals, within and without the profession. When it became sure that the library was to be a success, and larger accommodations were necessary, a call was made for contributions, to enable the association to buy its present quarters. The call was liberally answered and enough was raised to secure the wished-for house and make the necessary alterations. About $7,000 remains on mortgage. The income from the societies for the use of the hall, is more than sufficient to pay the interest on that sum.

No letter from Boston would be complete without a mention of the recent deaths of two well known physicians: Dr. J. B. S. Jackson and Dr. Jacob Bigelow.

Dr. Jackson was for many years Professor of Morbid Anatomy, and up to the time of his death, took an active part in medical matters. For more than thirty years wholly devoted to his duties as Professor and Curator of the Museums of the Medical School and Improvement Society, he is one of the earliest examples of entire devotion to scientific matters to be found in the profession in our country.

Dr. Jacob Bigelow died on January 10, at the age of 91. His literary as well as his scientific attainments obtained for him more than usual respect. His labors belong, for the most part, to the first half of the century. It would be vain, in this short space, to give an idea of their extent and varied character. He held various professorships, and was an author on widely differing subjects.

His "American Medical Botany," with its beautiful plates, published over sixty years ago, is to-day a standard work. Probably his most valuable contribution to the profession, was a little essay on "Self-Limited Diseases," read before the Massachusetts Medical Society, in 1835. It was the means of introducing a rational study of the natural history of disease, and a more simple mode of treatment than had hitherto been in vogue.

P.

FROM NEW YORK.

Mr. Editor:—The lecture referred to in your last, as having been delivered December 10th, by Prof. Andrew Clark, of London, on "Varieties of Pulmonary Phthisis," was a treat. The distinguished visitor was a guest of Dr. Flint's, at whose solicitation he consented to give his views on the above topic. He was eminently successful in pressing into the scope of one lecture, the condensed views of the present day, at least, so far as they obtain in England. Attention was directed to the three absolute conditions, which form the basis of all pulmonary decline, viz: cheesy, fibrous, and tuberculous conditions. I am sorry not to follow my own inclination in sketching his views, and pointing out wherein other specialists in that branch differ from him. Not differ from him exactly, but combine histological research with the clinical and etiological. The etiology of pulmonary phthisis, I mean the individual causes pertaining to each case as regards family history and cause of development, is now justly and correctly looked upon as the great stepping stone to exact differential diagnosis; ultimately, to therapeutics, let us hope. The lecture is published in the *Medical Record* of December 14th and 21st, and decidedly worth perusing.

Another Englishman, no less prominent in his specialty, has been our guest. I refer to Mr. Callender, whose fame rests upon his success in the avoidance of pain in the dressing of surgical cases. The Doctor, who, by the way, would never take a premium as the handsomest man, even at a country fair, had a reception tendered him by Prof. Sands, at which all colleagues having more or less claim to distinction were present.

Speaking of specialties, I must say a good word for the gynæcologists, as such. No branch of our profession is represented by abler men (if they were only a trifle less numerous), and for well-considered and cleanly executed work, both individually and collectively, they carry off the palm. The staff of the Woman's Hospital has lately been strengthened by filling existing vacancies, and making new appointments. As with the work of their hands, so with their brains, for, aside from valuable papers read at meetings, the gynæcological literature is better represented by its *Journal of Obstetrics* than is any other specialty. The *Journal* owes its rise and size to the exertions of its present editor, Dr. Mundé, who has certainly succeeded in obtaining for it an importance in medical literature never before dreamed of.

The various medical societies have elected their officers for the coming year; they have been duly installed, and have spoken their pieces. Before the Academy of Medicine, Dr. William H. Thomson delivered an address, which deserves widespread mention. He emphasized the necessity of having more systematic expositions of scientific subjects for the benefit of practising physicians, and showed that for the attainment of this object, the form of a lecture was indispensable. Neither medical colleges, nor societies, fill the requirement, a fact patent to every one of us who is *en rapport* with his profession. Something more is requisite in order to insure a steady and really effective influence, which would tend to crystallize about it the best talents of the medical ranks. There are those in every specialty, who could, in the course of a single lecture, sketch to his hearers all that is new and positively established.

Of other valuable papers read of late, I mention the one of Dr. Heitzman, on the importance of microscopical research for differential diagnosis, especially in the light of the most recent developments. This is true not only of the urinary sediments, wherein size and condition of the casts from uriniferous tubes

are of vital importance, but of red and colorless blood-corpuscles, their more or less ready shrinkage, the relative quantity of fibrine causing their adhesion, the quantity of living matter (granules), all furnishing valuable hints in diagnosis, and more especially prognosis. Repeated examinations of the blood of an individual at various times, now makes it comparatively easy for us to determine his tendencies to acute or chronic disease, and other points pertaining thereto, which do not come within the scope of my letter to describe. Apropos of red-blood corpuscles, Dr. Elsberg recounted to the Academy his investigation in regard to them, and which is the result of a year of histological research. Dr. E. showed, by a power of twelve-hundred, the network of living matter within red-blood corpuscles, that is to say, the granular matter, with their uniting threads, which in turn, are likewise living matter. I have since seen the same specimen privately. It will be well for your readers to be on the lookout for the publication of the lecture.

Scarlatina, with all complications ever known since old Hippocrates time (if it then existed), is still on the increase with us. Besides the danger of paralysis of the heart as an immediate factor, we are forced to look sharp for kidney trouble for weeks afterward. Serous effusions from sheer debility, or vaso-motor influences, into all possible cavities, are only side shows, which you must expect to take in, in every case. Here, a word or two about the Board of Health could be appropriately put in, but I abstain, for the same reason which prevents me from abusing a man whose social and other standing is already below par.

J. H. T.

COMMUNICATIONS

HEPATIC ABSCESS.

Messrs. Editors:—Permit me to call attention to an oversight of Dr. Robinson, in reporting one of his cases of hepatic abscess, contained in his very interesting and instructive paper on that subject, in your January number.

The omission of Dr. Robinson, (due doubtless to the fact that the patient was not under his continuous observation), is one of much practical moment, in view of the present state of discussion as regards the relative curative merits and safety of *simple puncture* on the one hand, and of puncture *with drainage* on the other.

On page 21, the Doctor reports a case seen by him in private practice, wherein a well-known gentleman of this city was *cured* of hepatic abscess, after a *second* puncture. He says: "The abscess was emptied by puncture with the trocar; the sack soon filled up, and was again emptied, after which the patient made a good recovery, and remains well to-day." This sentence conveys an erroneous impression, as I am informed by the patient himself, who has since been several times under my care for another complaint. The patient's own account of the subsequent history of his abscess is this: He says that a few days after the second emptying of the liver, he felt renewed uneasiness in that region, and on examining the pad worn over the seat of puncture, was surprised to find it saturated with healthy pus, which flowed profusely from the opening made by the trocar. This flow continued, and did not entirely cease for *nearly a year*. So far, then, from this case being an exception to the bulk of those published by Dr. Robinson, it is a remarkable illustration of the rule contended for, both by him and myself, *i. e.*, that simple and repeated puncture by the aspirator or trocar is, in the vast majority of cases, a very unsafe dependence for the cure of abscess of the liver; drainage in some form being an essential superaddition.

According to Dr. Davis, of N. Y., this question has been pretty effectually settled in Mexico, a region where such abscesses are very common; the method of Jimenez, so much lauded by Dr. Hammond, having been superseded by that of Vertiz.

WALTER COLES, M. D.

3004 *Olive Street, St. Louis, January 13th,* 1879.

A REPLY TO THE CARD OF DOCTORS DORSETT AND OUTLEY.

Messrs. Editors:—My attention has been directed to a communication in your January issue, relating to my trial of superoxygenated air, at Quarantine, last summer, and signed by Drs. Outley and Dorsett, at the time assistants to Dr. H. C. Davis.

The sentences supposed to have been underscored by Dr. Davis relate to unimportant points, but I maintain that they are as correct as any bedside notes can reasonably be. The notes were taken by me in person, at the bedside, while the patient was quite rational, and with unusual care to arrive at a correct history of the case. Their authority is the words of the *patient himself*. No other notes at all were taken in the patient's chamber, at least, while I had charge of him. I have the best reasons for believing, therefore, that all of the sentences, numbered 1, 2, 3, and 4 in the card, are quite correct, as regards the main points.

The marginal note, assumed by the signers of the card to have been written and signed by Dr. Davis, is indisputably a mistake, and Dr. Outley must be well aware of this, so far as the note may mean that I requested him (Dr. Outley) to pass a catheter, or to have one passed.

It was evidently written, if by Dr. Davis, a considerable time after the occurrence to which it alludes, in the midst of perplexing labors, and, indeed, is only now brought to light, some months after Dr. Davis' death. While I was at Quarantine I saw that Dr. Davis was greatly overworked, for he was so fatigued that he was obliged to retire soon after dark, the evening I arrived there. Boats were constantly passing, requiring his careful inspection and disinfection, and he had many sick in the wards under his personal care. These duties became more and more onerous and complex as the season advanced, and, in the midst of this unremitted strain and constant pre-occupation, it is not singular that he should be mistaken as to a point on which he does not seem to have reflected until many weeks had elapsed, while my own notes were taken at the time, and published immediately. During my visit, Dr. Davis had but little time to spare for anything not directly related to

his official duties. I had no opportunity of conversing freely with him, and he was in the patient's chamber with me but twice, as far as I can recollect, viz: when he led me in to take charge of him, and when I reëntered the chamber, after a couple of hours' repose. It was on this latter occasion that he said to me: "We have passed a catheter, and there is no water in the bladder." I never authorized or requested *anybody* to pass a catheter or to have one passed, and I will repeat, that Dr. Outley is quite aware, that in my instructions to him, on leaving the patient's chamber, at 3 P. M. on the 30th, the passage of a catheter was not spoken of by me at all; I simply asked him to administer the oxygen, and showed him how to do it.

The occasion alluded to, in the paragraph of the card beginning with the words, "Prior to the evening," and thus vaguely designated as to time, was when I was first introduced into Woodward's room to take charge of him, about 7 P. M. on Aug. 29th. I selected Mr. Woodward as a patient because his symptoms were such as are generally regarded as of necessarily fatal prognosis under any kind of treatment hitherto practiced, and because by instituting the experiment in a case otherwise utterly hopeless, I would put the matter at once to the severest test that could be applied to it. In taking up a catheter, when I first entered the room, I was about to procure some urine for testing for albumen. I never pass a catheter in yellow fever for a mere diagnosis of *suppression* as against *retention*, but only when I am particularly anxious to get the urine for an early diagnosis and prognosis, nor do I do so even then, when good reasons exist in the special case that a catheter should not be passed. When Dr. Davis hinted that there was suppression, I determined not to pass the catheter, for I did not wish to prove to the patient, who was a very intelligent man, that he had the deadly symptom, suppression. Nor did I wish to subject him to a harrassing and often very painful process, for which in a case of suppression, in 1854, I have seen anæsthesia required, when I expected the kidneys to act of their own accord, if the hypothesis, under which the inhalations of oxygen were to be instituted, was correct. I therefore, after administering jaborandi, and causing him to inhale the oxygen for some hours, placed a saucer under his penis, every time he sat upon the chamber-pot, to catch what urine, if any, might be passed while he was at stool. I thus patiently waited, all through the night and half the next day, *during seventeen hours*, viz: from 7:40 P.

M. on the 29th to 12:39 P. M. on the 30th, when, as I have stated in my account of the case, the patient passed some dozen drops of urine, which were all I ever got for physical examination, into this saucer, referred to in my article as "a separate receptacle." Thus it was, that although particularly anxious from the first, to determine the presence or absence of albuminuria in the case, on account of its importance in a diagnostic and especially in a prognostic point of view, and because *albuminuria* presupposes that very local paralysis of the blood-vessels which I was anxious to relieve, and, consequently, to establish *as existing* in the case under experiment, I *nevertheless* carefully refrained from passing even one of the soft rubber catheters, which I had carried down with me. I was fearful of irritating and annoying a man so gravely ill, and of demonstrating to him by any act of mine that could possibly be avoided, that what he knew from experience in yellow fever as a nurse in Memphis, very lately, to be a deadly symptom, was present in his own case. I will, therefore, take the trouble to repeat the words of my original paper, viz: that *I did refrain entirely and with unbroken determination from passing a catheter*, and that a catheter *was passed, without consulting me*, though I was within reach near by, and had asked to be called if any new feature presented itself in the case. The catheter was passed, moreover, *entirely in opposition to my intentions*, and when the case had been recognized as one of suppression by those who passed it, for the signers of the card assert that Dr. Davis declared in their presence, on a "*prior*" occasion, which was twenty-two hours previously, that suppression existed.

When I re-entered the apartment, and was told that the catheter had been passed, and the fact of his suppression thus unfortunately revealed to the patient, I was greatly shocked, and promptly accepted the occurrence as an unmistakable and intentional intimation to me that the Quarantine staff, for reasons of their own, had become desirous of reassuming the conduct of *their* patient's case, and I knew that my enterprise was at an end. I was much surprised to find that the patient had refused to respire the oxygen any longer, for he had been remarkably docile as long as I was in the room with him, sleeping quietly in long naps, between the inhalations, and even *while inhaling*, sometimes. That he might become tired of inhaling in course of time, I was prepared to expect, but thus far, I had seen no

indication of the kind. Had he become refractory with me, I would have used my best powers of persuasion to encourage him to persist in a measure which I knew gave him the only chance he had for his life, while it was in itself incapable of doing him any harm, and perfectly compatible with other medication, which I did not neglect, and was prepared to press more strongly still, as soon as I thought it likely to be successful. As he had ceased to inhale the oxygen, I knew that the local congestions would become re-established, and that he would soon get worse again, and surely die; I could do no more, however, so, after some consultation appropriate to the circumstances, I left for the city on the steamer.

I have elsewhere stated my reasons for assuming that many of the worst symptoms of the case were alleviated under the influence of the inhalations; *adepts* in the symptomatology and treatment of yellow fever can judge of this from the detailed notes I have published. Dr. Davis himself admitted that the man was better, in a remark at dinner, about 2:30 P. M., on the 30th of August, attributing the improvement, however, to some champagne he had ordered for him, of which Woodward had taken a glass or two the day before. The fact that he slept, and wanted to sleep, is enough of itself to prove that he was better, for the proper accompaniments of suppression are fearful anxiety, jactitation and delirium or coma, and not easy sleep and desire for repose.

A bare modicum of modesty would have prevented the young men, who have emitted this ill-advised card, from expressing their opinions on points of my treatment, while as yet mere internes of less than half a year's graduation at the time of my visit.

I was at Quarantine by the authority of the Health Commissioner, and with the consent of their superior. Had they shown, at that time, a proper desire for information concerning the motives of my conduct, and the import of an experiment I was conducting in the interests of science, at the greatest personal inconvenience—one, indeed, which ought to have been profoundly interesting to them—they might have saved themselves the discredit of this absurd and gratuitous publication, whose main affirmations they have not ventured to endorse.

W. Hutson Ford, M. D.

2945 *Gamble street, St. Louis, Mo., Jan.* 20, 1879.

BOOK REVIEWS AND NOTICES.

BOOK REVIEWS.

CLINICAL DIAGNOSS: A Hand-book for Students and Practitioners of Medicine. By JAMES FINLAYSON, M. D., Physician and Lecturer on Medicine in the Glasgow Western Infirmary, etc., etc. With 85 Illustrations. *Philadelphia: Henry C. Lea.* 1878. 12mo. pp. 546.

This is a good book of its class, although it belongs to a class which we are very loth to endorse. Dr. Finlayson states in his preface that, while engaged in clinical teaching, "the want has often been felt of some volume to which students might be referred for assistance in the study and reporting of medical cases." It occurs to us that the student ought to have, not one, but quite a number of volumes to which he might be referred, and that these should not be of the character of brief "helps," but thorough treatises. The danger with these "handbooks," "aphorisms," etc., is that the student is liable to depend on them, and to go no further.

Finlayson's clinical diagnosis covers more ground than most such works. Besides his own valuable teachings, it embraces contributions from several excellent specialists, thus constituting it a sort of miniature encyclopœdia of diagnosis, with Finlayson as editor. We find nothing to challenge in its teachings; it is sound, and up to the times.

The first chapter, "On the Physiognomy of Disease," by Dr. W. T. Gairdner, Professor of the Practice of Physic in the University of Glasgow, is quite a disappointment, being a nice enough little talk, that does not amount to anything. Then follows a short chapter on case-taking, by Dr. Finlayson, which is good, and is the only part of the book that fits the title. Twenty-three pages are devoted to the general signs of pyrexia, with temperature curves and sphygmographic tracings in abundance, a special section being assigned to the use of the sphygmograph.

The skin, hair, nails, glands and joints have but one chapter amongst them, which rather crowds the latter members of the group. It is quite a convenience to have the date of appear-

ance of all the febrile rashes presented to one's eye in a single table, as it is here. The special senses are next considered. We gallop through a course of ophthalmology in seventeen pages, and finish otology in less than three pages, while the testing of cranial nerves and the localization of cerebral lesions occupy but little more space.

When the reader learns that he is furthermore favored with a chapter on symptoms of disorder in the nervous system, another on the use of electricity, a brief disquisition on insanity by a specialist, and another on the fauces, larynx and nares by a semi-specialist, with laryngoscopy and rhinoscopy thrown in; that the editor himself contributes an excellent essay on the examination of the urine; that the male generative organs are honored with a brief chapter, and the female generative organs, so far from being neglected, are cared for by the Regius Professor of Midwifery in the University of Aberdeen; he will surely be ready to admit that Dr. Finlayson intends to give the purchaser his money's worth.

In order to end where, alas! all medicine ends, and to enable his readers triumphantly to confirm the clinical diagnoses, which, by the aid of this hand-book, they shall have been enabled to make, the editor closes his work with a chapter on *post mortem* examinations.

If every man west of the Mississippi, who buys Finlayson's book, should thereby be stimulated to insist on a *post mortem* examination of all the obscure fatal cases in his practice, this little duodecimo might, after all, do more good than all the other medical books sold this year. E. W. S.

A Text Book of Physiology. By M. Foster, M. A., etc. With illustrations. Second edition, revised and enlarged. *London: Macmillan & Co.* 1878. 8vo., pp. xii, 640.

An event of no mean importance to English medicine, (and American as well), is the rise of a new school of physiology in England. At no time within the present century were English physiologists either so numerous and preëminent, or so productive, that the term could properly apply to them. In the earlier years, Charles Bell, Prout, Marshall Hall, and a few others were the more conspicuous for standing alone; and later, the labors of Goodsir, Bennett, Lockhart Clarke, Pavy, Beale, and many more—so far as they were independent of Continental schools—were disjointed and desultory, however valuable. But

there appears to be little danger of exaggeration in applying the term to a group of men, whose work (both as investigators and teachers) is not only important in itself, but has a certain internal connection and harmony that bids fair to make their influence felt as that of a "school," and to renew the eighteenth century glory of the English name in this field. This group of modern men comprises such names—besides Huxley, *facile princeps* in biology,—as Burdon Sanderson, Michael Foster, Rutherford, Rolleston, Brunton, and others.

One important fruit of this new impulse in physiological study and reading, is the appearance of a true and original "text-book," cast in a new mould—one that treats of what we, to-day, call the science of physiology with sufficient detail and accuracy, without being unwieldy. The work of a master trained to the modern methods of investigation and himself an active worker, this book of Dr. Foster's is a perfectly plain relation of what is acknowledged as true (and much that is probable) at the present date; it is free from the traditions of by-gone days, which the mere compiler of text-books finds it so impossible to shake off. We do not mean to convey that it is light reading; on the contrary, it discourages superficial study, as it is quite devoid of padding, and without rhetoric. Its teaching is thorough, enabling the student to comprehend the science as a whole, and emphasizing details with reference to their mutual relations.[1] The book, therefore, differs widely from those encyclopædic works heretofore supplied to the medical students of our country, from which the reader may commit to memory a vast number of facts, and comprehend nothing.

It is necessary to know, however, that Dr. Foster has presupposed in his readers "such an elementary acquaintance with physiology, as can be gained from Professor Huxley's *Elementary Lessons in Physiology*." (The latter, by the way, is not generally known among physicians to be the "classic" that it is. An acquaintance with anatomy and histology, and a general knowledge of physics and chemistry are also taken for granted, though an appendix of fifty-six pages is given to the chemistry of those organic substances peculiar to the animal body. Embryology, also, is excluded. In short, the students of this text-book of physiology will be pleased (many astonished, no doubt)

1. As an illustration of our meaning, we would refer to such passages as the first three paragraphs of Book II, chap. iii. p. 311.

to find that it is really devoted to physiology, and not to the accustomed mixture of anatomy, histology, physics, chemistry, *and* physiology, out of which it is nearly impossible to extract a clear, intelligible picture of physiological life.

Its six hundred pages, therefore, cover more ground than we are wont to see covered in much larger text books. Since the center of physiological research has, in the last twenty years, shifted to Germany, it is not wonderful that Dr. Foster's way of presenting and arranging his subjects should remind one of the German schools, and, indeed, some parts of the book call to mind the very excellent little treatise of L. Hermann.

The first edition was published in 1877, and rapidly exhausted. In London, we are credibly informed, copies of the book commanded more than double the publication price for some time, until the second edition was issued. This, naturally, contains no important changes, the enlargement being chiefly due to the addition of a number of illustrations—mostly of instruments; it has suffered, however—we note it with much regret—by the omission of the preface to the first edition.

To the older members of the profession, this book will be a revelation of progress in the science fundamental to medicine, such as they can have gained no adequate conception of from even the most assiduous reading of current literature. G. B.

A Manual of Physical Diagnosis. By Francis Delafie ld, M. D., and Charles F. Stillman, M. D. *New York: Wm. Wood & Co.* 1878. 4to. pp., 30.

American literature already possesses several standard works on physical diagnosis. The concise and excellent manual of Dr. Loomis, and the more elaborate work of Dr. Flint, both hold high and recognized positions as reference and text-books for students.

The appearance of a new work pre-supposes, either that the author has something new to offer, or that the arrangement and details are set forth in a clearer and more comprehensive manner than any heretofore offered. A new work, must, therefore, challenge criticism in its comparison with those already published.

This manual of Dr. Delafield consists of the text bound interleaved, and is illustrated by superimposed plates, with printed transparancies of the body.

The author, in his preface, states that "it is intended for the

use of those who have to teach and to learn the art of physical diagnosis," and that "the object of the entire work is to furnish a sort of skeleton, to which each one may add the facts furnished by his own observation." If we consider the work as a skeleton manual, we can call it excellent, for it has for its foundation the works of the standard authors on physical diagnosis.

If, however, we must criticise it as a manual from which students may learn physical diagnosis, it deserves further mention.

A careful perusal of the work shows that the author is fully posted on physical diagnosis, but is most unfortunate in his effort to make the facts clear to others.

In striving to make the manual concise, he carries this to such a degree as to make it perplexing and sometimes misleading. To one already thoroughly informed, some of his statements can be fully appreciated; but, to the student seeking after knowledge, they may be misleading and seem incorrect. For example, page 10 (4 and 5): "Tympanitic resonance is heard over air in the pleural cavities, over large cavities, over *solidified lung*, over *lung compressed* by fluid, and in some cases of emphysema;" again, "amphoric resonance is heard over large cavities, over air in the pleural cavities, over *solidified lung*."

Again, he makes "cavernous breathing heard over cavities, over *consolidated lung*, and over *compressed lung*"—page 12 (6). A manual intended for students should be as positive as possible, general truths and the most constant facts should be enunciated, while the exceptions may be omitted to be applied at some future day.

That tympanitic and amphoric resonance are, under special conditions, heard over solidified lung, is true, but still this occurs so exceptionally, that these signs cannot be considered as *characteristic* signs of consolidation of a lung.

These examples will suffice as illustrations of many occurring throughout the book, where exceptional signs are given as characterizing a peculiar condition of the lung. A literal construction of certain other sentences of the author makes him say things which would be deemed incorrect, according to the general acceptation of the meaning of physical signs. For example, page 13 (1): "He states that "the crepitant râle is heard in dry pleurisy;" that auscultation may give sub-crepitant râles or a pe-

culiar creaking sound in pleurisy with adhesions"—page 19 (5). That "gurgling râles are heard in the bronchi of compressed lung"—page 13 (4).

Again, in speaking of pleurisy, he states: "Above the fluid, over the compressed lung, there is pulmonary resonance, or exaggerated resonance, or tympanitic resonance"—page 18 (21). The author may be a follower of Dr. Leaming, and place the crepitant and sub-crepitant râle among the intra-pleural sounds; such is the only justification that can be given to his expression. As these peculiar views have not yet found general acceptance among teachers, they are hardly in place in a manual intended for students.

In a lung *compressed* by fluid, the sign generally observed is dullness, whilst gurgling pre-supposes either a cavity or an enlargement of a bronchus, a condition not necessarily belonging to a case of pleurisy.

In his effort to combine many exceptional signs in concise sentences, we are surprised that the author has omitted pleurodynia and dry pleurisy from the conditions causing "suppressed respiration."

Dr. Delafield again takes a new departure in classing the dry râles as a variety of breathing—see page 12—13 (8). The sonorous and sibilant râles, in their time-honored acceptation as evidences of a peculiar condition of the bronchial mucous membrane, cannot with any greater propriety be transformed into a variety of breathing, than the other adventitious sounds heard in the bronchi, as, for instance, the moist râles.

It is with pleasure we commend the author's classification of the varieties of pleurisy; we believe it to be more practical and more comprehensive than that given in several of the already existing manuals.

The physical signs of valvular diseases of the heart are disposed of in remarkably few words.

The diagnosis of both aortic and mitral lesions being based entirely on the existence of murmurs (page 27). The predominant enlargement of the left or right ventricle, according to the lesion, the occurrence of the accentuated pulmonary second sound in mitral lesions, and the character and place of the apex beat being entirely ignored.

The superimposed plates, prepared by Dr. Stillman, are excellent as a guide to the beginner in fixing the typographical relations of the different organs to each other and to the chest walls.

The defects in the book are such, that however worthy it may be as a resumé of the various signs occurring in health and disease, still, as a manual for the student seeking to learn physical diagnosis, or for the teacher endeavoring to impart practical knowledge, it can never displace the already published works on the subject. The manual is handsomely bound, a credit to the publisher, but of little use to the profession. W. C. G.

PRACTICAL EXAMINATION OF THE URINE. By JAMES TYSON, M. D. Second edition, 12mo. *Philadelphia: Lindsay & Blackiston.* Price, $1.75.

A clear and concise description of the most simple and practical methods of recognizing and estimating, quantitatively, the various constituents of the urine, in health and disease. It is, moreover, the work of one whose practical acquaintance with the subject enables him to appreciate the difficulties met with in the application of these methods, and to teach the way of overcoming them.

The section on the quantitative estimation of urea would, I think, have been enhanced in value by the addition of Fowler's differential density method with the hypochlorite of soda (*vide New York Medical Journal*, Vol. XXX., June, 1877, p. 614), which, being sufficiently accurate for clinical purposes, is simple, and requires no costly, cumbersome apparatus for estimating the volume of gas evolved.

For purposes of differential diagnosis of the diffuse diseases of the kidney, some classification must be adopted, and the author has preferred the anatomical to the clinical. That all attempts to differentiate these diseases from this (anatomical) point of view are somewhat misleading, is too well known to all students of renal pathology to require more than mention here. Dr. Tyson points out the errors that may and do arise from this method, and copes with the regretable confusion in nomenclature with considerable success. While Bright's disease (acute and chronic) is separated into several different forms, it is, on the whole, clearly enough indicated in appended remarks that some of these forms may be merely stages or phases of other forms.

The book is of a size, with flexible cover, to be carried in the pocket; is well indexed, and has tables for reducing the metric to the English system of weights and measures. It is a valuable aid to clinical medicine, and well deserving of the popularity that has secured the demand for a second edition in so short a time. J. B.

NOTES ON THE TREATMENT OF SKIN DISEASES. By ROBERT LIVEING, A. M., M. D., Cantab. Lately Physician and Lecturer to Middlesex Hospital, and Physician in Charge of the Skin Department. Fourth edition, revised and enlarged. *New York: Wm. Wood & Co.* 1878. 12mo. pp. 127.

This little book is similar in scope to the "Epitome of Skin Diseases," not long since offered to the profession by Tilbury Fox. It is impossible to present the subject of dermatology, or any of the other departments of medicine, in the limited compass attempted in these diminutive works, and, while Dr. Liveing modestly terms his publication "Notes on the Treatment," a classification and a clinical description of the various cutaneous maladies are also embodied in its pages. The large work of Fox's, the treatise of Duhring's, and the hand-book of Neumann's, while moderate in size and price, are comprehensive in character; and, therefore, render books like the one under notice entirely superfluous.

Where there is so much omitted, both in description and treatment, differential diagnosis not being considered at all, it is a difficult matter to determine whether the omission is due to oversight or intention. We shall, therefore, confine our critcism to a few points, only. The nomenclature used is more in accordance with modern dermatological ideas than is usual in English works on this subject, and the influence of Hebra's teachings is marked throughout the book. We observe, however, that he still differentiates between lichen simplex and eczema, and retains the obsolete and absurd term, porrigo, applying it to impetigo contagiosa. Pruritus, a mere state of itching of the skin, he very properly disassociates from the papular disease, prurigo (Hebra); but he describes a condition of the cutaneous surface, due to pediculi, where the lesions are entirely secondary, as a prurigo. Pediculosis would have been a more appropriate term.

He likewise follows M. Hardy's description of pruriginous strophulus, which affection seems to be nothing more than the prurigo of Hebra under another name.

Out of respect to the practical bias of his countrymen, we presume, the author has appended the usual selection of formulæ, which certainly add nothing to the merit of his book. Formulæ are valuable only when they occur in the body of the text, where the exact indications for their use may be given in appropriate connection with the subject under discussion.

Knowing Dr. Liveing to be an accomplished physician and dermatologist, we cannot help expressing the wish that he redeem the error of writing a small book by giving us the fruit of his ripe experience in a large one. W. A. H.

ESSENTIALS OF CHEMISTRY: Inorganic and Organic: For the Use of Students in Medicine. By R. A. WITTHAUS, A. M., M. D. *New York: Wm. Wood & Co.* pp. 257, 32mo.

Since the royal road to science is as yet undiscovered, and the great "Nuremberg funnel" for expeditious cramming is irretrievably lost, attempts innumerable have been made to supply the deficiency by a variety of easy methods, short cuts and quick transits, to overcome the asperities of the regular old road to the various scientific accomplishments. We are informed in the preface of this handy little volume that it is designed for the special needs of the American medical student, by omitting all but those chemical problems which have a direct bearing upon the practice of medicine, etc., etc.

Now, the American student does not need any general culture, nor any acquaintance with the important chemical processes in pharmacy, in manufacture, nor with the thousand influences chemistry has on every day life, but only a narrow outline of chemistry as it concerns medical practice, then this vest-pocket volume is admirably adapted to his purposes. Its arrangement in questions and answers, its terse definitions, its clear print (permitting reading under difficulties), its miniature size, commend it especially to the "lame ducks" for a help during examination, and its copious index and methodical arrangement render the finding of the proper answer to any question asked unusually easy.

The only legitimate use of such a work appears to us to be as a guide to the quiz-classes, usually conducted by advanced students of the senior class, and, if only used for such purpose, much good may be accomplished by introducing more method and regularity into those useful exercises than they ordinarily can boast of.

A few errata have occurred (a matter almost impossible to avoid in chemical formulæ, which are so unintelligible to the average compositor and proof-reader), but most of those are easily corrected. Some of the worst occur on pp. 146 and 203, making C quinquivalent in the structural formulæ there given, and in the text. With many features to commend its legiti-

mate use, and, unhappily, not a few to tempt to improper practices, we predict that the little volume will find fair sales, and chemical examiners may look out for a remarkable uniformity in appropriate answers among students who had not excelled during the course. C.

BOOKS AND PAMPHLETS RECEIVED.

PHYSIOLOGY: Preliminary Course Lectures. By JAMES T. WHITTAKER, M. A., M. D., Professor of Physiology and Clinical Medicine in the Medical College of Ohio; Lecturer on Clinical Medicine, etc., etc. Illustrated. *Cincinnati: Chancy R. Murry.* 1879. pp. xii.—288.

A PRACTICAL MANUAL OF THE DISEASES OF CHILDREN: With a Formulary. By EDWARD ELLIS, M. D., late Physician to the Victoria Hospital for Sick Children, etc., etc. Third edition. *New York: Wm. Wood & Co.* 1879. [Library of Standard Medical Authors.] 8vo. pp. xii.—213.

CLINICAL DIAGNOSIS; A Hand-book for Students and Practitioners of Medicine. Edited by JAMES FINLAYSON, M. D., Physician and Lecturer on Medicine in the Glasgow Western Infirmary, etc., etc. With 85 Illustrations. *Philadelphia: Henry C. Lea.* 1878. 12mo. pp. 546.

THE LOCAL TREATMENT OF ECZEMA. By HENRY G. PIFFARD, M. D., Professor of Dermatology, etc. *New York: Reprint from the Medical Journal.* 1878.

ON THE TREATMENT OF STRICTURE OF THE FOSSA NARICULARIS. By HENRY G. PIFFARD, M. D. *New York: Reprint from the Physician and Pharmacist.* 1879.

FRACTURE OF THE FEMUR. By EDWARD BORCK, M. D., St. Louis, with illustrations. *Geo. O. Rumbold & Co.* 1879. 12mo. pp. 52. Reprint, with additions.

A CASE OF OVARIOTOMY (unsuccessful). By EDWARD BORCK, M. D. (Reprint from St. L. Med. and Surg. J'l, Dec., 1878).

FIRST ANNUAL REPORT OF THE HEALTH DEPARTMENT OF THE CITY OF ST. LOUIS. 1878. Paper. pp. 103.

PHYSICIAN'S POCKET DAY-BOOK. *Leonard.* Price, $1.00. St. Louis Book and News Co.

SOCIETY PROCEEDINGS.

DISTRICT MEDICAL SOCIETY OF NORTHWEST MISSOURI.

The fifteenth quarterly meeting of this association met at the court-house, St. Joseph, Mo., January 9th, 1879, at 10 o'clock, A. M.; President, Dr. George C. Catlett, in the chair; Secretary, J. Geiger, M. D.

Minutes of previous meeting were read and approved. Calling of the roll found the following present: Drs. W. H. Bryant, T. McLaney, A. Goslin, J. M. Huffman, C. W. Spicer, W. W. Carter, I. L. Tracy, R. H. Smith, W. I. Heddens, Hugh Trevor, E. A. Donelan, C. J. Siemens, T. H. Doyle, Jacob Geiger, J. M. D. France, J. P. Chesney, J. M. Richmond, S. F. Carpenter, George C. Catlett, J. D. Smith, D. I. Christopher, and W. B. Craig.

The chair appointed Drs. Richmond, Tracy, and Carpenter, a Committee on Programme.

After a short consultation, they reported the following order of exercises: Two o'clock P. M., essay by Dr. W. H. Bryant; three o'clock P. M., essay by Dr. George C. Catlett; four o'clock P. M., essay by Dr. Jacob Geiger; five o'clock P. M., essay by Dr. J. Leigh; seven o'clock P. M., essay by Dr. T. H. Doyle; eight o'clock P. M., essay by Dr. W. I. Heddens; nine o'clock P. M., essay by Dr. A. Goslin; ten o'clock P. M., discussion of "Pneumonia," and reports of cases. Adopted.

On motion of Dr. Doyle, the resolution to amend Art. 5th, Sec. 3d of constitution, in reference to election of members, be taken up and acted upon. The resolution was voted on and carried, changing the vote from a four-fifths to a two-thirds vote.

Dr. G. W. E. Chamberlain, of Rochport, Mo., and Dr. J. C. Farr, of Alanthus, Mo., made application for membership. The Committee on Elections reporting favorably on the applicants, they were balloted for and duly elected.

The Committee on Revision of the Constitution and By-laws, read their report, which was laid over until the next meeting for final action.

Adjourned until two o'clock P. M.

AFTERNOON SESSION.

The society was called to order by President Dr. Catlett, at two o'clock P. M.; J. Geiger, secretary.

Dr. A. B. Allen, of Barnard, Mo., applied for memberhip, and was elected.

Dr. Bryant, of Savannah, Mo., read an excellent paper on "Lacerated Perineum," and exhibited a needle, after his own plan, for the operation. The paper was received and referred to the Committee on Publication.

The paper was discussed by Drs. Siemens, Richmond, Goslin, Geiger, Doyle, Christopher, Spicer, Catlett, and Craig.

Dr. Geiger, of St. Joe, read an essay on electricity in surgery. Discussed by Drs. Carpenter and Siemens.

Adjourned until 7:30 P. M.

EVENING SESSION.

The society convened at 7:30 P. M., Vice-President Dr. Hugh Trevor in the chair; Dr. W. B. Craig, secretary *pro tem.*

Dr. Doyle read a masterly paper on the "Disorders of Menstruation." Discussed by Drs. Richmond, Goslin, and Craig.

Dr. Goslin presented a specimen intussusception of the bowels.

Dr. Spicer opened the discussion on the subject of "Pneumonia," and a lively debate ensued between Christopher, Siemens, Goslin and Craig.

Dr. Craig presented a pathological specimen—Fibro-cystic tumor of the ovary—removed by Dr. E. W. Bliss, of Hiawatha, Kans.

Dr. Richmond requested an opportunity to enter a plea for the prompt use of the forceps.

Drs. Richmond, Doyle and France were appointed a committee to prepare programme for next meeting. The committee, after consultation, reported as fallows:

Essayists—Drs. R. H. Smith, C. W. Spicer, C. J. Siemens, and D. I. Christopher.

Subject for discussion—"What are the best remedies to improve appetite, digestion and assimilation."

The report was adopted.

Drs. Catlett, Goslin, Bryant, Donelan, and Trevor were appointed a committee to draft a petition to the State Legislature, to establish a State Board of Health, also to correspond with the different medical societies to secure a concert of action to that end. Adjourned until April 10th, 1879.

SOUTHERN ILLINOIS MEDICAL ASSOCIATION.

This association has a membership of near three hundred. While restricted in its operations to Southern Illinois, it yet includes members from all parts of the State.

The requirements for membership are that the applicant be a regular graduate of a reputable medical college, and be possessed of a good moral and professional character.

It meets in "annual session" on the third Wednesday in January of each year, and in "semi-annual session" on the hird Wednesday in June of each year.

The fifth annual meeting met in Centralia, on the 15th day of January, 1879; Dr. D. S. Booth, president, in the chair. The following officers were elected for the ensuing year:

President, C. W. Dunning, M. D., Cairo; First Vice-President, William A. Gordon, M. D., Chester; Second Vice-President, D. H. McCord, M. D., Centralia; Secretary, H. V. Ferrell, M. D., Carterville; Treasurer, L. Dyer, M. D., Du Quoin; Board of Censors, Drs. H. R. Guthrie, T. B. Moore, M. S. Jones, N. R. McKinzie, J. K. Rainy; Committee on Publication, L. Dyer, M. D., Du Quion; H. V. Ferrell, M. D., Carterville.

Among other proceedings, the following, being of interest to the profession in general, may be noticed:

Resolved, That any medical college adopting the graded system of teaching, with the three-term course of lectures, deserves our highest commendation, and that we will exert ourselves to support this, with every other effort to raise the standard of medical education.

Resolved, That in view of the arduous labors performed by the State Board of Health, they be allowed a reasonable compensation for their services. That, in view of the great risk incurred by the handling of drugs by those who are incompetent, we humbly pray that all persons handling medicines shall be required to have such qualifications as that they may know the power and uses, legitimate or illegetimate, to which they may be put, and that the safety of the community requires the enactment of a law regulating the qualifications and responsibilities of such persons.

The next meeting will be held in Sparta, Randolph County, June 18th, 1879. H. V. F.

ST. LOUIS OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Puerperal Eclampsia.—By G. A Moses, M. D.

Paper read October 17th, 1878.

Gentlemen: In offering for your consideration the subject of this essay, I desire to preface it with the acknowledgment that the matter has already been far more fully and ably discussed, than it is within my power to do, and doubtless, all that I shall say is as familiar to your thoughts as household words. Yet, we find, I think, much and most important material for reflection, in the fact that since the work of Lever has connected the convulsive seizures of puerperal and parturient women with albuminuria and renal engorgement, the tendency, among investigators, has been largely, if not entirely, to explain why and how the renal lesions, producing albuminuria, and its co-existant pathological conditions, act in causing puerperal eclampsia. True, there have been, and are now, perhaps more, who dispute the fact as regards cause and effect, and while some, as preeminently Cohen, Playfair, and Macdonald, look to certain portions of the nervous system for the chief seat of lesion, most of those who dispute the uremic theories, advance others, no more satisfactory. Do not these differences, deduced from clinical experience, from physiological studies, from necroscopic observations, honestly and persistently maintained, urge upon us the conviction, that, to a great extent, this is still quæstio vexata, and, as such, of necessity, demands further study and discussion. This, then, is my apology for submitting for your consideration the subject of Eclampsia Puerperalis. Barnes, in his essay, read at the first meeting of the American Gynæcological Society—a paper full of suggestions from a mind crowned with knowledge—says: "I doubt, if in the whole range of medicine, there be anything more interesting than the history of an eclamptic fit in pregnancy."

Says Macdonald, in a most valuable contribution on this subject: "If we expect ever to arrive at unity of belief in regard to the causation of eclampsia, and, thereupon, to establish a rational and fixed treatment of the disorder, it appears to me

that the shortest road towards the attainment of such an object is the diligent collection, comparison, and criticism of cases of the kind, as they occur." [1]

From the very limited number of cases which I have had opportunity of observing, I was induced, several years ago, to dissent, at any rate, in the majority of instances, from the uremic theories. Later experience has strengthened my views, and the results of the observations of others, which have been lately published, tend strongly to confirmation of the belief, that nearly, if not entirely, all of these cases may be classed, as they are by Marshall Hall, in his Croonian lectures, as "Uterine Epilepsies." (1852.)

Epilepsies, inasmuch as they depend upon anatomical and functional deviations from normality of the nervous system. Uterine, or more properly puerperal, as the inciting causes are to be searched for in the physiological developments that are occasioned by the puerperal condition.

The following cases have suggested this paper:

I. Mrs. J. W.—Pregnant the first time; age, about twenty; large, healthy looking; had been under observation of my associate, an old practitioner, and excellent obstetrician (Dr. Gordon); had had no symptoms of disturbance of any sort, excepting that she dreaded labor, as her husband, a young man, had already lost two wives in first labor—one with convulsions. She was taken in labor in the morning of August 28, 1868, and with the commencement of labor, a violent epileptiform convulsion. As the patient was but a short distance from our office, Dr. Gordon was soon with her; administered chloroform, which co trolled the convulsions while its influence endured; the os dilated slowly; the convulsions becoming worse, he sent for me to bring his forceps; urination had been free; we drew from the bladder a quantity of high-colored urine, which did not coagulate with heat; she was bled freely; chloroform continued; bleeding seemed to have no effect upon convulsions. The os being fully dilated, the forceps were applied, and delivery readily effected. Yet, the convulsions continued, followed by coma in the intervals. I injected one-fourth gr. morphia, subcutaneously, with the effect of arresting the fits for several hours, when they recurred, and I repeated the morphia, one-half gr.; sleep followed more naturally, and continued for some

[1] Obstetrical Journal of Great Britain and Ireland. Sept., 1878.

hours, when, upon awakening, she immediately had a violent spasm; morphia repeated. It being now twelve hours since delivery, I catheterized some dark urine, which coagulated with heat very abundantly. A mercurial purge was administered; the patient being able to swallow, Bromide Potas: ℈ i. was given every two hours. From this time, no more convulsions, and convalescence was uninterrupted.

II. — Frazer.—Age, thirty; fourth pregnancy; threatened with convulsions a few days before labor; bled freely. Labor normal.

III. Mrs. W. A. G.—Second pregnancy; œdematous, headache, muscæ volitantes, vertigo, dimness of vision, albuminuria, two months prior to confinement. Rochelle salts as purge; citric acid lemonade as drink. Albuminuric symptoms disappeared, and labor was normal.

IV. Mrs. J. B. W.—Sixth pregnancy; previous pregnancies normal; albuminuric from seventh month; slight œdema; labor normal; twins. Convalescence rapid; albumen disappeared promptly.

V. Mrs. S.—Age, twenty-five; second pregnancy; small abdomen; very œdematous; albuminuria for more than a month. (As she was in the country up to this time, I do not know how long the condition had existed.) Confined at eight months; normal labor; child, a small but healthy female. Convalescence prompt.

VI. The same patient as Case 1.—Fourth pregnancy; albuminuria for *some time*. Labor at term, normal. Convalescence prompt and complete.

The existing theories need be only alluded to, as they are of course familiar: First, that of Braun, who maintained that the convulsions were due to retained urea, consequent upon acute inflammation of the kidneys, as described by Bright, resulting in failure, on the part of those organs, to eliminate the excrementitious matter from the blood, and so producing urinary toxemia

Frerichs modifies Braun by experimental proof that uræmia was not the sufficient cause, but that the urea being metamorphosed into carbonate of ammonia, the latter became the toxic agent; moreover that the etiology of the nephritis was in some instances, alteration of the blood crasis, caused by pregnancy; and secondly, mechanical interference with the renal veins, by pressure from the enlarged uterus.

The blood crasis, resulting from the drain upon the maternal blood in furnishing nutrition to the fœtus.

He thus adopts, as one of his causes, the supposition of Lever, viz: venous obstruction.

Leischman also, seems to adopt Frerichs explanation as the most probable, but this author, in truth, does not appear to entertain very definite views in regard to the matter, for, immediately after indicating his partial assent to Frerichs theory, he says: "If, on the other hand, the dissections of Frankenhauser are to be held as demonstrating a direct connection with the nerves of the uterus, we must admit it as possible—as was, indeed, long before conjectured by Tyler Smith—that the nervous and not the vascular system, may after all be the starting point of puerperal eclampsia."

In 1863, Rosenstein, of Berlin, applying the theory of Traube on the production of convulsions, to puerperal convulsions, argues that, in consequence of the hydremia (which he assumes to be almost constant in pregnancy), the dilated arterioles, and aortic pressure, during labor vastly increased, that œdema and anæmia of the cerebral centers are produced; and so we have these convulsions accounted for on Traube's theory. This may be well styled in contradistinction to the toxic—the mechanical theory.

In considering the plausibilities of the probability that uremia is not as Braun asserted, "*commonly*" the cause of puerperal eclampsia, but occasionally the cause, apart from a pre-existing chronic nephria, a brief contrast of the condition observed in acute nephritis, and the so-called puerperal nephritis will be excused. The former, as it occurs from the various well known causes, is usually declared somewhat suddenly by more or less lumbar pain, frequent calls to pass water, which is diminished in quantity, of a dark, bloody, or smoky color, containing considerable albumen, which, according to the researches of Robin, in addition to the coagulation upon addition of heat and nitric acid, assumes upon contact with oxide of copper, a reddish violet color, and produces a more or less abundant, flocculent black precipitate. The microscope reveals epithelial tube casts, epithelial cells, (free) and blood corpuscles.

For symptoms, we have fever, œdema, dropsies, often increasing very rapidly, aud with the culmination of these symptoms various nervous disturbances, as convulsions, derangements of vision, coma, more or less profound may occur, but fortunately the graver nervous symptoms are rare, especially

convulsions, which usually are regarded as preceding a fatal termination. Recovery is gradual and slow.

Such a case occurred during the first pregnancy of a patient of Prof. Barker's[1] in the eighth month, the immediate result of exposure to cold. The case presented all the symptoms of an acute nephritis, urine being entirely suppressed for twenty-four hours after which about four ounces of dark, smoky urine was passed, fully one-third of which coagulated on addition of nitric acid. This case recovered entirely, labor intervening during convalescence, on the seventeenth day after the attack, when scarcely a trace of albumen could be detected. The labor was severe, lasted ten hours, and was terminated by forceps. On the fourth day after confinement, fever occurred, and an increase of albuminuria, but in four days this disappeared, and convalescence was rapid.

Contrast this with the course of an albuminuric pregnant woman. There are usually no decided symptoms; micturition is always frequent during pregnancy, so that this might account for the absence of specially frequent desire, due to nephritic inflammation. No fever; usually no pain, or slight, in the back; œdema varies in amount, but I think the effusions almost never reach the degree, nor advance with the rapidity, common in the first case. The urine may be diminished in quantity, respond to treatment with nitric acid and heat, but, according to Robin, not to the copper test.

According to Basham on Renal Diseases, p. 137, "the microscopic appearances of the sediment of urine in these instances, consist of a few simple granular casts, unaccompanied by evidence of cell structure derived from the tubes. Some vaginal or urethral epithelium is usually seen." "I believe," he says, "this microscopic examination of the sediment to be the only means for a correct diagnosis between an albuminuria in pregnancy, simply congestive, and the same state of the urine arising from serious and all but fatal *pre-existant* disease."

Cephelalgia is common, and often intense and sudden. Convulsions occur much more frequently; according to Rosenstein, once in four cases of his statistics, and the convulsions may be repeated with most frightful rapidity. Convalescence is usually prompt and rapid when it does occur. On the other hand, death also is as sudden.

[1] "Puerperal Diseases," p. 71.

In the renal disease then, due to the condition of pregnancy, the symptoms associated with albuminuria, as a usual course, partake more of the character of the chronic Bright's disease, in which we find the kidneys contracted. The Granular Contracted Kidney, of Roberts; Cirrhotic, of Stewart. To which authors I refer for for further information.

The mechanical theory of Rosenstein, as ingenious as it is, must, I think, apply to few and rare instances. So far as pressure upon the renal veins is concerned, apart from the well known fact that the growth of other tumors within the abdomen rarely if ever produce eclampsia, the fact exists that of all large intra-abdominal growths, the pregnant womb grows most anteriorly, and the renal veins are protected by the elastic intestines. In one instance of death following eclampsia, the left renal vein was high up behind the pancreas, and the right entirely free from obstruction.

This supposition in the commencement of inquiries to explain the condition, was, we confess, a most natural one, and it is not impossible that, especially in twin and first pregnancies, where the uterus, restrained by tense abdominal walls, and unusually large, may, in this way, produce an amount of renal engorgement; and Macdonald, in his very instructive paper, read before the Obstetrical Society, of Edinburg, mentions the fact that he has seen an ovarian tumor produce this result. But these instances must, perforce, be extremely rare, and we have no post mortem proofs of the fact.

The opportunities for necropsies are not common, but the lesions found, so far as affects the kidneys, vary—for, as a matter of course, we *may* find all the varieties—and especially in cases of advanced Bright's disease would we expect convulsions to occur; but where previous history has not indicated the cendition, but the eclamptic attacks have been, as frequently happens, the first indication of trouble, Virchow says: "The kidneys as well as the liver, and perhaps the spleen, exhibit analogous parenchymatous swelling, due to absorption of granular, cloudy and apparently albuminous swellings." Litzman (Bartels) says that old complications are remarkably frequent.

Bartel's says: "The entire process (Parenchymatous Neph ritis) seems seldom or never to run so violent a course in pregnant women as in many other cases; the extreme degree of

hyperæmia, culminating in actual extravasation, occur, only quite exceptionally in the nephritis of pregnancy."

In a case by Macdonald[1] —*post mortem* by Hamilton—"the kidneys were quite different from anything else I have ever seen in acute renal diseases;" the epithelial of the tubules were small, and the nuclei abnormally distinct in very many of the tubes; in others, in addition to this, there was developed within the periblast a minute drop of clear homogeneous matter, which, after increasing in size, burst through the cell substance, or into the uniferous tube, similar drops from other tubules descending, united and formed, long hyaline casts, distending the tubule to twice or thrice its usual size. The bloodvessels were little, if at all, altered, and no inflammatory exudation between the tubules.

In very many instances, excluding confirmed pre-existing renal degeneration complicated with acute inflammation, the renal lesion of itself has not been proven to be of sufficient importance to produce the eclamptic attacks, while in cases of temporary albuminuria, followed by eclampsia and prompt recovery, we have only clinical evidence of renal engorgement which certainly is often the result of the convulsions.

Drs. Mahomed and Macdonald have directed more especial attention to the condition of the brain. Dr. Mahomed's paper, I have not seen. The latter gives two post mortems.

The dura-mater, in one case, congested, longitudinal sinus engorged with blood; the other, apparently healthy.

Pia-mater extremely congested in both. In the first, no arachnoidean effusion; in the second, a considerable amount. Pons and medulla, pale in both.

Corpus callosum and fornix extremely pale, corpora striata extremely pale; in the right corpus striatum of the first case, the anterior portion contained several small punctiform hemorrhages; spinal cord anæmic, meninges somewhat congested. Microscopic examination showed the vessels of the brain to be entirely empty, except here and there a stray leucocyte, the lumina of the arteries seemed *small*, as if the vessels had been in a state of contraction. In the region between the corpora olivaria were deposited large numbers of leucocytes (here the vessels were peculiarly abundant); these leucocytes were most abundant immediately around the capillary vessels, arranged in

[1] *Obst. Jr., G. B. & I. Sept.*, 1878.

little groups of five or six, while at a little distance from these vessels they ran in line, and also formed little rounded groups. The vessels here also seemed to contain, in some places, a considerable number of the same bodies, and they were seen protruding from the outer aspect of the capillary wall, and then, becoming detached, apparently passing into the tissues.

These appearances were observed in two other cases. Further investigation is of interest in this direction. Convulsions occur in numerous instances where no albuminuria exists from beginning to end, and where, after death, no renal lesion is discoverable; but the brain, to the naked eye, approaches to the macroscopic appearance already noted; at times apoplectic effusions result, and are doubtless occasioned during the convulsion. (See Barker, Macdonald, etc.)

Again, we may have profound chronic or acute nephria, terminating during the puerperal period in death, and still no sign of convulsion—even though fœtal death result.

Barker, Elliott and Macdonald report cases of the most aggravated type, still without convulsions. I have recorded such cases in my own experience.

Albumen may exist in the urine independently of renal disease, and is not always to be considered as indicating it. Dr. Duncan (*Practitioner*, April, 1875) says: "Pregnancy itself produces a state similar to that found in chronic kidney affections. The women are more hydræmic, and there is an increase in the amount of urea in the blood; and, at the same time, there is a plethora of thin, watery blood."

On the other hand it may be asserted that nephritis may exist without albuminuria, as Dr. Galabin (*British Med. Jour.*, 1875) justly asserts, but there are almost certainly other signs, especially microscopic, to be found, and some œdema is almost sure to be observable, or else we have no proof that renal disorder occurs. (See Morland on Uremia—prize essay, 1861.)

If, then, we find such a variety of conditions existing in this class of cases, which can be possibly referred to the kidney, and nevertheless the modes of attack are so similar, there must be some common condition which has a close relationship as regards predisposition and excitant to eclamptic explosions; and from clinical experience, fortified most strongly by the researches and experience of such character as have already been referred to, more particularly the lectures of Barnes

(Lumleian, 1875), I feel convinced that it is chiefly, if not entirely to the nervous centers and ramifications, that we must look for further and surer knowledge. Of the lectures just mentioned I am tempted to quote the summing up, viz:

1. Pregnancy and labor require for their due fufillment an extraordinary supply of nerve force.

2. This implies an extraordinary development of the spinal cord.

3. This provision implies a greatly augmented irritabillty of the nervous centers.

4. The disturbances of nutrition entail some alteration in the blood, which reacts upon the nerve nutrition and predisposes to increased excitability.

The following statistics, collated by Rosenstein, from Ziemmesen (Vol. XV., page 320), exhibit interesting data as to the time of occurrence and continuance of the fits (449 cases are reported): In 121, convulsions occurred before labor; in 200, pains set in during labor; in 118, after completion of labor, many of which, he says, "may be attributed to after pains!" Of 115 cases, 39 had no convulsions after delivery; in 37, they recurred, but less severely; in 37, they continued violent.

Taking into consideration the mode of attack, the time of attack, the surroundings, including circumstances of mental condition, climate, seasons, and perhaps some peculiarities pointing to epidemy, and the individual peculiarities, such as latent predisposition, especially such as liability to, and occurrence of convulsive seizures in previous life; I think we are warranted in the presumption that the reflex, sympathetic or vaso motor nervous system plays always the chief *role* in the causation of eclampsia puerperalis.

Firstly, they are most common in primipara; in cases of seduction, and consequent anxiety and remorse; under circumstances of mental and physical exhaustion or excitement; in twin pregnancies. Relation to latency of previous nervous diseases requires further study.

Secondly, they occur in all their violence without any previous, cöexistent or consecutive indications of renal disease or albuminuria.

Thirdly. The most profound lesions of the kidney may exist, and be recognized before, during and after completion of pregnancy, without production of the seizures.

Fourthly. While microscopic revelations, as regards the depurative organs, vary from absolute normality to all forms of chronic advanced disease, the nervous centers in certain portions bear very close similitude.

Fifthly. The physiology of the nervous system, especially the sympathetic, seems to offer the most philosophic explanation of the results.

Sixthly. The most successful treatment, both prophylactic and curative, is addressed directly to the nervous system, with the exception of blood-letting, and this is efficient often as a temporary expedient to avert danger of pressure or rupture.

Already the bases for the first four deductions have been given. As regards the effect of climate, I have no positive data, but from general observation during a residence of several years in the extreme South, I am satisfied that puerperal eclampsia was very greatly more frequent a complication than it is found in this city. As to peculiarities of season, etc., Barker and Elliott report frequency of cases occurring at the same time. Prof. Barker, especially, noted this.

The relation of the generative organs through the nervous system to the entire organism is peculiarly intimate.

The uterus, and especially its inferior segment, is most richly supplied with nerve filaments and ganglia. Receiving its supply from the hypogastric plexus, it in turn communicating directly with nine pairs of ganglia, receives nerve filaments from the lumbar and sacral portions of the cord, or nearly one-third of the entire sympathetic and spinal system (29 pairs of ganglia), and Frankenhauser claims to find direct nerve connection with the renal branches.

The nerve filaments of the sympathetic are distributed abundantly to blood vessels, as far as they can be made out, and are possibly the source of vaso motor contractility, and there seems to be besides various ganglionic seats in the spinal cords, a vaso motor center, so that, to use the words of Foster, "the tonic actions of all the arteries are gathered up into a center, in order that they may be the more readily affected by diverse influences proceeding from all parts of the body," and "the action of the vaso motor center may be exalted or depressed by nervous influences reaching it from various sentient surfaces, afferent impulses may, by means of this center, exalt or depress arterial tone, and this depressing or exalting influence

may be brought to bear, either on the whole vascular system, or on particular vascular areas."

May we not thus account rationally for the condition cited in the cerebral examination already quoted. The deep vessels, constricted in calibre, allowing a diminished amount of blood to enter, this is reflected upon the circulatory centers—we have increased pressure in order to overcome obstructions and remove engorgements—especially of the vessels of the meninges. The convulsion then may result, followed by coma, the effect of pressure and venosity.

The effects of chloroform, tincture of veratrum, the bromides, opium, all are sedative, the nervous excitability is lessened by them, and the constricted vessels allowed again to dilate, and permit the passage of the circulating fluid, and the removal of the physiological excitant, the contents of the uterus, usually terminates the nervous lesion of function, or modifies it so that safety is secured.

I am painfully aware, gentlemen, of the imperfeet manner in which I have fulfilled the duty imposed upon me, but, feeling sure of your considerate leniency, I trust that the deeply engaging subjects which I have endeavored to bring before you, will elicit from your experience, valuable aid in the continuance of the study.

Stated Meeting, January 16, 1879. Dr. S. G. Moses, M. D., President, in the Chair.

PUERPERAL ECLAMPSIA.—Discussion of Dr. G. A. Moses' paper, read before the Society, Oct. 17, 1878.

Dr. Boisliniere.—I cannot agree, except as regards a very limited class of cases, with the deductions of the paper; there are clinical facts which elucidate somewhat the etiology of the disease, which, however, is obscure, and not found on *post mortem* revelations, which reveal very few changes.

One great clinical fact is that primapara are far more frequently subjects of eclampsia than are multipara, 94 in 154 cases recorded by Imbert-Groubeyrer being of the first class. Another clinical fact is, that albumen is found in the urine in seven out of eight cases (Lachapelle); another, that pregnancy produces hydræmia, the very watery constituents of the blood being in-

creased to 840 parts, and, according to Miale's experiments, hydræmia increases the quantity of albumen in the blood, producing the condition of super-albuminosis (Gluber)—over-distention of the vessels causes sometimes a transitory nephritis which generally rapidly disappears after labor—when it does not, then the nephritis has preceded the puerperal condition. The excess of albumen in the blood should be appropriated for the nutrition of the fœtus, if not, then it will appear in the urine, and remain in excess in the blood; children born of women who die of eclampsia, are puny, small. ill nourished; they have failed to appropriate the albumen, which has been lost in the urine.

The nervous theories I adopt to a very limited extent; I admit there are children who seem predisposed to convulsions, and there are some women the same; narrowness of the pelvis frequently coincides with this, then the process of parturition, dilatation of the cervix, and distention of the perineum may by irritation produce convulsions, just as dentition does in some children; but this is not the cause in the greatest number; those in which, after an easy labor, as the head passes the perineum, and in others where 24 hours after labor is completed convulsions occur, there has been nothing to foretell such a result, and the latter class is particularly fatal; these cases cannot be accounted for by nervous theories; nervous conditions are not sufficient to explain such cases. The theories of Traube and Rosenstein cannot be reconciled with clinical and therapeutic facts; chloroform and blood-letting act by virtue of the cerebral anemia which they produce; the loss of 40 or 60 ounces of blood is a relief which would not be the case if anemia were the cause for which blood-letting is the remedy. That cerebral anemia is produced by chloroform narcosis was exhibited in a case related by Dr. Sims, when in this city. He, with Nelaton, was operating for vesico-vaginal fistula, when the patient stopped breathing, and seemed dead, the French surgeon grasped her by the feet, and, lifting them over his shoulders, allowed the head to be suspended; directly respiration was resumed, and the operation completed. You cannot produce during labor, with chloroform, sufficient cerebral anemia to kill, and, as chloroform relieves eclampsia by causing cerebral anemia, Rosenstein's theory cannot be true. A healthy anemia must be produced, and you have reached the cause of the convulsion.

Chloroform would cure all cases of nervous origin by restoring circulatory balance, but such cases are the exception. I like Dewees' division into hysteric, epileptic and apoplectic form.

(The Doctor here related a case from Dewees.)

The paper said nothing about treatment. I think that much good may be done by the preventive bleedings recommended by the older authors, in cases which present such threatening admonitory symptoms as disturbances of vision, epigastric pain, suffused countenance, and headache. Dr. Pallen always bled for headache of pregnancy, and followed this with a dose of black draught; it reduced tension, and relieved the symptoms. As for the German system of therapeutics, the less said abont them the better.

For treatment of convulsions, when they occur, bleed, then use chloroform, unless the woman be in condition of cyanosis; under such circumstances chloroform would be fatal. Diaphoretics will be of service, and jaborandi especially acts most admirably; two and one-half drachms in the rectum will rapidly produce intense diaphoresis. (A case was related exemplifying the benefits of the drug.)

Labor should usually not be hastened nor interfered with; if advancing, and death seem imminent, or delay occur, forceps may be used, but as a rule parturition should be left to nature.

Next to rupture of uterus, eclampsia is the most fatal of puerperal accidents.

Dr. Maughs.—After referring to the various theories said, that during pregnancy, the blood of the woman, on account of the necro-biotic processs going on in her system, and also that of the child is loaded with excrementitious material, at the same time the drain upon its solid constituents renders it extremely hydræmic, and both of these conditions are greatly exaggerated when from any cause, pressure or hyperemia, the kidneys filter off the albumen,and retain the urea.

This state of the blood corresponding with the physiological hypertrophy of the left ventricle renders the woman liable to convulsions.

Morbid irritability of the nervous system caused by the poisoned blood, which is driven to the brain with unwonted force, constitutes the predisposing cause, which only requires a slight exciting agency, such as mental emotion, labor pains, etc., to produce hyperemia of the meninges with consequent anemia of the vaso motor centers and convulsions.

In treatment, Dr. M. agreed with the previous speaker, except that he advocated the use of morphia, hypodermically, and favored the promotion of delivery.

Dr. Prewitt was glad to find that the old fashioned treatment by bleeding was endorsed.

Dr. Robinson related a case of *post partem* convulsions occurring while he was endeavoring to check *post partem* hemorrhage. He ceased his efforts to arrest bleeding. Allowing it to continue, the convulsion ceased—not to be repeated.

Dr. Papin related a case of a lady who died with convulsions in her fifteenth labor, all the previous parturitions having been uncomplicated.

Another case, in which at the birth of every boy convulsions had occurred, even during a miscarriage, while with four girls labor was uncomplicated. Albumen is repeatedly found as a sequel to the fits, although absent prior to their onset.

Dr. G. A. Moses said, that many of the cases and conditions cited by Dr. Boisliniere were calculated to confirm the argument of the paper. The subject is one to be thoroughly reviewed, untrammelled by captivating theories, with the aid so far as possible of *post mortem* studies, like Dr. Macdonald's; as for the treatment, that was intentionally avoided, as he desired the discussion to be confined to etiology.

Adjourned Meeting, January 7, 1879. Dr. S. G. Moses, President, in the Chair.

TREATMENT OF PLACENTA PRÆVIA.—The President read from Dewees' Midwifery, arguments advocating the use of the tampon. Dr. Ford presented a placenta, and reported a case of central implantation of the placenta, which he treated by introducing the hand, cone-shaped, and after two hours and three quarters steady and gentle pressure, succeeded in dilating sufficiently to introduce the hand, rupture the membranes, turn and deliver the child, which was asphyxiated by delay occurring in extraction of the head. No hemorrhage occurred after the hand was inserted, and the patient, apparently, did well, excepting perhaps there was a slight degree of elevation

of temperature until the tenth day, when a rigor occurred, followed by others, and the formation of several depots of pus in various portions of the body, particularly the great joints. Death ensued on the twenty-eight day.

The case gave rise to discussion as to the propriety of the method adopted, Dr. G. A. Moses, objecting that the process of even careful and skilled manual dilatation, under the circumstances, was liable to produce lesions; that though slight in character, might be sufficient to permit and encourage septicemia, while the extreme difficulty on the part of the accoucheur in sustaining tactile sensibilities in such a constrained position for so long a time, rendered the practice difficult and unsafe. The teachings of Barnes or Dewees seem decidedly preferable on every score.

Dr. Boisliniere.—We do not read Dewees enough. Each time I read his treatise I like it better. The case related was skillfully treated, and was one of those unfortunate instances of the accidents which cannot be foreseen. I prefer the forceps, where they can be used in these cases, but generally would not hasten delivery if the hemorrhage was arrested.

Dr. S. G. Moses.—I cannot agree with the last speaker in regard to delivery, on account of danger to the child. I deliver as soon as possible, without forcible dilatation, by turning, unless the head descends promptly, then the forceps. The life of the child should be saved, if possible, and in central implantation this can only be secured by prompt delivery.

ST. JOSEPH MEDICAL ASSOCIATION.

The regular weekly meeting of the St. Joseph Medical Association was held in the court-house, St. Joe, Mo., Jan. 2d, 1879. President, Dr. Donelan, in the chair; J. Geiger, secretary.

This being the annual meeting, the society proceeded to the election of officers for the ensuing year, which resulted as follows:

President—Jacob Geiger.
Vice-President—J. H. Stringfellow.
Secretary—S. F. Carpenter.
Treasurer—Hugh Trevor.

Dr. E. A. Donelan, the out-going president, made a few appropriate remarks, and introduced President-elect Dr. J. Geiger, who, upon taking the chair, made a lengthy speech.

The discussion of the regular question was postponed.

Dr. Carpenter was appointed to read a paper in two weeks from date.

"Fracture of the Clavicle," was the subject selected for discussion at the next meeting.

The society adjourned to reconvene in social way.

SELECTIONS.

CHANCRE ON RIGHT SIDE OF PENIS AND BUBO IN LEFT GROIN.—Mr. Gould presented an out-patient who, three weeks before, had noticed a chancre on the right side of his penis followed, in a week after, by a bubo in left groin The bubo was opened, and the chancre treated with iodiform ointment, and in a few days the patient was convalescent.

Mr. G. remarked that there could be no doubt that the cause of the bubo in this case was the absorption of irritant matter from the sore on the penis, for there was an entire absence of any other efficient cause. The interest in the case lies in the fact of a sore distinctly on the right side of the penis, producing a bubo in the left groin, showing a crossing of the lymphatics from the right to the left side, from which it may reasonable be inferred that there was a decussation of these fine channels, (those of the left side passing over to the right). Such cases are not rare. At University College Hospital a man was admitted with a large bubo in the left groin from a soft chancre on the right side of the glans penis. Also, a woman with a soft chancre on the right labium and a bubo in the left groin. In the latter case a bubo subsequently developed on the right side. Mr. G. had met with other cases of this "cross lymphatic infection" among the out-patients. Each of the patients mentioned had the sore on the right side and the bubo on the left. This is probably accidental, as might be shown by a large number of cases; where the arrangement of the lymphatics in a fine network is borne in mind, the occasional occurrence of this "cross infection" will not be surprising.—*Lancet.*

INDIA RUBBER COMPRESSION FOR FINGER TROUBLES.—Mr. Hussey, in the *Times and Gazette*, suggests the use of rubber in swellings of the fingers, which are often tedious and painful, in persons of rheumatic or gouty constitutions.

He uses a piece of an India rubber finger-stall in fissures and slight cuts of the fingers and in cases of thickening or deposit around the joints of the fingers after injury, with great relief to the patient. The brown finger-stalls of pure rubber being better than the black or vulcanized.

A piece of tubing may be cut into lengths of about an inch or more. One of them can be slipped over the joint by the patient himself, after he has been taught how to do it. It should be worn constantly, day and night. The patient will soon learn how to roll it off, and re-apply it after washing his hands. When it has become too loose to give the necessary support, another length can be taken.

A MONUMENT OF DERMATOLOGY.—Cleopatra's Needle, which has been successfully erected in London, on the banks of the Thames, will long speak of the devotion, to the interests of cutaneous medicine, of Professor Erasmas Wilson, F. R. S., F. R. C. C., by whose munificence it was brought from Egypt, and reared in the metropolis. He has just paid Mr. John Dixon, who undertook the work, his cheque for $50,000; and it is pleasant to think that the means of bestowing this and his other gifts have come wholly from the practice of his profession,—wholly from dermatology.—(*Archives of Dermatology, Jan.*, 1879.)

A GARGLE of great service in commencing augina, and in all chronic irritations of the throat, is prepared with carbolic acid and tannin, of each fifteen parts, alcohol sixty parts, distilled water one hundred and twenty parts. A teaspoonful in half a glass of water. Use once, or oftener, daily.—

IN the vomiting of pregnancy pure carbolic acid when applied to the cervix uteri is just as efficacious as stronger caustics, and is better for the organ in question.—*Boston Medical and Surgical Journal.*

ANNOUNCEMENTS FOR THE MONTH.

HOSPITALS.

CITY HOSPITAL, corner Linn street and Lafayette avenue—D. V. Dean, M. D., Superintendent in charge.

Clinics.

Mondays,	A. M.,	9 to 10,	Prof. Robinson, Medical.
"	"	10 to 11,	" Lankford, Surgical.
Wednesdays,	P. M.,	3 to 4,	" Smith, Medical.
Saturdays,	"	4 to 5,	" Hodgen, Surgical.
Thursdays,	A. M.,	9 to 10,	" Bauduy, Nervous Dis.
"	"	10 to 11,	" Lankford. Surgical.
"	"	11 to 12,	" Michel, Eye Diseases.

Saturdays (Same as Wednesdays).

ST. LOUIS MULLANPHY HOSPITAL, corner Grand avenue and Montgomery street—In charge of the Sisters of Charity.

Clinics.

Tuesdays,
- 9 to 10. Dr. S. Pollak, Eye and Ear.
- 10 to 11. Prof. E. H. Gregory, Surgical.
- 10 to 11. Prof. L. Ch. Boisliniere, Gynæcological.
- 10 to 11. Dr. G. A. Moses, Diseases of Women and Children.
- 12 to 1. Dr. W. C. Glasgow, Chest and Throat.
- 12 to 1. Dr. L. L. McCabe, Medical.

Thursdays and Saturdays, (Same as Tuesdays).

ST. JOHN'S HOSPITAL, Twenty-third and Morgan streets—Conducted by Sisters of Mercy.

Clinics.

Prof. Prewitt, *Surgical*, daily, except Sundays, from 11 to 12.

Prof. Michel, *Diseases of the Eye,* Tuesdays and Fridays, from 11 to 12.

Prof. Kingsley, *Children's Diseases,* Mondays, Tuesdays, Thursdays and Saturdays, from 2 to 3.

Dr. Shaw, *Medical,* Mondays, Tuesdays, Thursdays and Fridays, 10 to 11; and *Diseases of the Chest,* Wednesdays and Saturdays, 10 to 11.

Dr. Papin, *Gynæcological,* Tuesdays and Fridays, 3 to 4.

Dr. Todd, *Ear, Nose and Throat,* Mondays, Wednesdays and Fridays, 2 to 3.

ST. LUKE'S HOSPITAL, Tenth and St. Charles streets—*Episcopalian.*

Dispensary.

Dr. Green, *Eye and Ear,* Mondays, Wednesdays and Fridays, from 2 to 3.

Dr. Barret, *Diseases of Women,* Mondays and Fridays, from 3 to 4.

Drs. Alleyne and Fischel, *Diseases of Children,* Tuesdays, Thursdays and Saturdays, from 1 to 2.

Dr. Wm. Porter, *Diseases of the Throat and Lungs,* Mondays and Fridays, from 2 to 3.

ALEXIAN BROTHERS' HOSPITAL, N. W. Corner Jefferson Avenue and Osage Street.—Daily, Dr. Wesseler, Medical. Daily, Dr. Lutz, Surgical.

MARINE HOSPITAL. Dr. Walter Wyman in charge.

SOCIETIES.

ST. LOUIS MEDICAL SOCIETY, Polytechnic Building, corner Seventh and Chestnut streets, meets Saturdays, from 8 to 10 p. m. Papers are read, morbid specimens exhibited, cases related, and discussions had.

MEDICO-CHIRURGICAL SOCIETY, Mercantile Library Building, meets on the second and fourth Monday of each month, from 8 to 10. p. m. Morbid specimens, cases and discussions.

MORTALITY TABLE.

CITIES.	ESTIMATED POPULATION.	DEATHS DURING THE PAST MONTH.	DEATH RATE PER 1000 LIVING	
			FOR PAST MONTH	FOR PAST YEAR.
New York	1,093,171	2,032	23.68	23.42
Philadelphia	876,118	1,263	18.74	21.54
Brooklyn	549,438	927	21.64	25.50
St. Louis	500.000	463	11.83	12.00
Chicago	460,000	572	16.17	17.83
Boston	375,476			20 10
San Francisco	300,000	438	17.52	16.14
Cincinnati	280,000	441	20.53	15.81
New Orleans	210,000	370	22.90	
Memphis	48,000			

METEOROLOGICAL.—For Past Month.

CITIES.	TEMPERATURE, F			HUMIDITY.	
	Highest	Lowest.	Mean.	Rel. Mean.	Rain, in's.
St. Louis	35°	—1°	16.9°	72.7	.39

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.	METRIC. Gms.
♏i. or gr. i. equals - - - - -	06
f℥i. or ℥i. equals - - - - -	4
f℥i. or ℥i. equals - - - - -	32

The decimal line instead of points makes errors impossible. A teaspoon is 5 Gms.; a tablespoon, 20 Gms.—*Metric Bureau.*

ST. LOUIS
COURIER OF MEDICINE
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COLLATERAL SCIENCES.

VOL. I. MARCH, 1879. No. 3.

ORIGINAL COMMUNICATIONS.

INFLUENCE OF ALTITUDES ON CONSUMPTIVES.

BY J. HILGARD TYNDALE, NEW YORK.

THE curative influence of high altitudes in checking the progress of pulmonary consumption is beginning to be universally recognized by the medical profession.

In Germany, Dr. Brehmer, of Goerbersdorf, in Silesia, first started a sanitarium for the treatment of phthisical patients. On account of the active opposition of the Berlin professors, it was some four years before he succeeded in obtaining a concession from his government. But truth will prevail, even in medicine, in which deeply-rooted prejudices oft seem to gather strength as time advances.

Brehmer held that reduced atmospheric pressure, the constant sojourn of a phthisical patient in an atmosphere rarified and pure, was the proper food for the diseased lung, and, as such, was to be considered the long-sought-for agent for the cure of consumption. The idea that a reduction of about one-sixth to one-fifth of the pressure of the air column should be the means of bringing about such results as were actually accomplished by Brehmer's treatment, was ridiculed by these same authorities, and some vials of wrath,

in the shape of publications, were poured out over his head. The undoubted success of his method is attributed to a change of habits and of surroundings of the invalid, aided by Dr. B's local treatment by shower-bath, etc. Later on I will present my theory of what agents constitute the true remedy for the collective conditions known as phthisis pulmonalis, and based as it is upon the truths of natural philosophy, hope to have it acknowledged in the future that it is the true solution of the great problem of successful treatment of consumption. But I will not anticipate.

In Europe there are now three or four health resorts at high altitudes. In this country attention has been drawn to the subject by Drs. Loomis, Dennison and others, chiefly at the sessions of the American Medical Association. One sanitarium is in successful operation at Asheville, North Carolina, situated on a spur of the Blue Ridge Mountains. The elevation at that point is 2,250 feet above the level of the sea, and it is in connection with this elevation that I wish to offer a point for consideration.

It has been found that, in order to find almost perfect immunity from phthisis, an increased elevation is required as we approach the equator from the north or south, and this additional altitude is reckoned to be 300 feet for every degree of latitude towards the equator. Thus in Northern Germany, immunity from phthisis is placed at about 1,600 feet (Goerbersdorf is 1,715 feet); in Switzerland, from 4,500 to 5,000 feet; under the equator, at from 10,000 to 11,000 feet. If we examine the elevated regions of this country (I confine myself to the United States), we find that the mountain ranges of the East present no high upland plateaux of any great dimensions. Single mountain spurs and *strictly localized plateaux* are there, but even these latter have not the requisite altitude which their latitude calls for. It is so in North Carolina, where the Southern region calls for fully double the altitudes which exist, as at and near Asheville. It is the same in Western Tennessee, where, in addition to lack of elevation, the favored spots are so small, cramped, confined to a lim-

ited space, as to be accessible to and affected by all the noxious influences of the surrounding lower regions. As this subject will be again referred to, I will only add here that in Colorado the immunity from phthisis is placed at 6,000 feet. And Colorado is in a more northern latitude than North Carolina and Tennessee.

The western part of North Carolina and the mountains of Eastern Tennessee serve to illustrate all that can be said for and against *medium altitudes*, though there are other sections of this country and South America, which come under the same heading. In their favor it is held that they are advantageous resorts for cases in which high altitude is not well borne, or not at all permissible. Such cases are rare. Further on I will show that patients who are not so far advanced in phthisis as to leave them no chance save to die at home and among friends, can safely be taken to an altitude where consumption is unknown. Now, it will be said, the altitudes at which approximate immunity from phthisis is found are very high altitudes, the sudden change to which might endanger the patient's life. Be it remembered that strictly localized high altitudes (single mountain tops, for instance) are not to be counted as health resorts, under any circumstances. High altitudes, however, of vast extent are approached by gradually rising ground, thus affording the invalid a chance to make a slow ascent without seeking a different part of the hemisphere each time a change becomes necessary.

The second objection to medium altitudes, as existing in this country as well as in Europe, is, as I have said, their limited extent, confining the invalid to a prescribed locality. I do not mean to say that such localities are cramped up within a narrow space, because I know better. What I do mean to say is, they are in no case extensive enough to be free from the influences of the surrounding lowlands.

Last, but not least, comes the objection that even such resorts as are high enough for their particular latitude (as the northern ones of Europe) are burdened with an excess

of moisture, gathered by the mountains, exposed as they are to the moist Atlantic currents.

It will be seen, therefore, that the ideal resort for consumptives must have other attributes than elevation alone. One of these is *absolute inland position.* This would point to the Rocky Mountains as the most desirable range, running, if not through the geographical center of the country, at least sufficiently distant from the great oceans. Of the whole range again we should prefer the eastern slope of the Rocky Mountains, and, to keep within proper latitude, that portion which we find in Colorado, and including the northern half of New Mexico, and the northeast corner of Arizona. In addition, we count in as approaches the whole western half of Kansas. This gives us, as an *approach to the higher altitudes*, a vast plain, from the Missouri River to the foot of the Rocky Mountains, with a rise so gradual that it appears to be a perfect level, until at the foot-hills of the Rocky Mountains an altitude of 4,000 feet has been reached.

Then comes the mountain range itself, *interspersed with high plateaux* of various altitudes, from 5,000 feet to 12,000 feet, the whole extending over the entire State of Colorado and a goodly portion of the neighboring States. The highest of these mountain peaks range from 11,000 feet (Mt. Cameron) to 14,000 feet and some hundreds (Long's and Pike's Peak).

Again, we find among the foot-hills, *parks of lesser dimensions*, in many cases covered by pine forests. "Foot-hills" must not be confounded with hills in any other part of the country, since their average elevation is about 8,000 feet.

The same favorable general and local conditions exist in some parts of New Mexico and Arizona, but these sections are at present more or less inaccessible. Speaking of the continuation of the elevated plateaux in Mexico, Dr. Dennison says: "These exceedingly dry, elevated plains, including extensions to the north, into New Mexico and Arizona, would claim much more of our interest and study

were the habits and lives of their greasy original inhabitants more inviting and congenial to the cultivated American. The loose sand and fine lime-dust, together with the rapidly increasing growth of the prickly and inhospitable cactus, as you go south and southwest from Colorado, may reasonably indicate the undesirableness of much of that southern region."

Our duty in this generation, with regard to the treatment of phthisis, is, first, to arrive at definite conclusions as to what should constitute an *ideal* health resort for consumptives; and, secondly, to adapt this ideal to the standard of what we find of *real* localities among the varied climates of the earth, which answer all requirements, so far as scientific research may have determined them.

In selecting such a region we must assure ourselves of its possessing four qualifications, *sine qua non:*

1. It must be accessible to mankind; railroad facilities should be near.

2. The comforts of life should be as nearly the same as invalids are accustomed to at home.

3. The locality should have much and varied scenery as surroundings, and not be a limited oasis in a desert.

4. If a town or village, it should be one the future of which is more or less secured, and not open to the possibility of early decay.

As yet we have no established rules for the treatment of pulmonary phthisis, as regards the exact elevation, average temperature, humidity, amount of sunshine, electric tension, the suddenness, direction and velocity of winds.

Not even the experiences of the European sanitaria (Goerbersdorf, Davos, Falkenstein) are as yet out of their infancy. Most of them would not be applicable to this country, except as to generalities, least of all to Colorado, no such enormous inland plateaux of great elevation throughout, existing in Europe.

The various attributes of climate above mentioned are intimately interwoven, and dependent upon each other. These points will be enlarged upon when I come to speak

of and explain my new theory in regard to the climatic therapeutics of pulmonary phthisis.

Of *elevation*, the general rule holds good, that the nearer the equator the greater should be the elevation. It has been calculated that for every degree of latitude toward the equator, an additional elevation of 300 feet is requisite.

The *temperature* of high altitudes is, of course, lower than on the level ground at sea-level; that is, it is at all times cooler. Near the equator, this is very desirable. As with elevation, so it has been calculated with temperature, that its decrease is about 1° Fahrenheit for each 300 feet of elevation. This is not true in all cases, but holds good as a general rule. The mean annual temperature on the eastern slope of the Rocky Mountains, for instance, is higher than the average elevation would seem to indicate. Thus, the remarkable fact is developed, that the mean thermometrical showing (whether daily, monthly, or annual) of elevated stations at the base of the Rocky Mountains is *higher* than in the same latitude on the Atlantic coast, or the Pacific, and in the Mississippi Valley. The explanation of this is found in what I have dwelt upon before, to-wit: the *far inland position*. The rays of the sun pass through the rarefied air almost unobstructed. They fall upon land and water. The specific heat of water is four times as great as that of land, and when heat rays strike this land surface without having lost any of their power, they will be absorbed far more rapidly than by water. Now, the greater the surface presented, the more heat can be absorbed, and this condition is present in the shape of the upturned sides of the mountains presenting a greatly increased surface for the action of the sun's rays. But the earth which so readily absorbs heat, as readily gives it out at night-fall into a dry atmosphere, and, of course, causes as sudden and great a falling of the thermometer as it had at sunrise caused a rising. Thus, the ample daily and yearly fluctuations are caused.

Besides, the *mountains protect* the plateaux from strong winds and moisture which they gather, allowing the sun-

shine to prevail on the level ground. The mountains protect the plateaux mostly to west and northwest. In high altitudes, the capacity of the rarefied air for holding moisture is very much reduced.

Then there is the *dry, sandy soil*, which rapidly absorbs moisture, being only slightly covered with buffalo grass.

Rivers and creeks, as sources of moisture, are scarce. So are trees, comparatively speaking, and what of moisture is gathered by them during a rain storm is afterwards rapidly absorbed by the dry atmosphere.

Humidity, coolness, and *dryness* of the atmosphere are increased by increased elevation. The expansion of air under the influence of solar heat increases its capacity for holding and retaining vapor. Now, the elastic force of vapor, or the absolute humidity of the air, diminishes with height, though as yet we do not know at what established rate, if any. Of the air becoming more and more rarefied by increased elevation, we know that it is twice rarefied at a height of three and one-half miles, four times at seven miles, sixteen times at fourteen miles, and so on in regular multiples of four. It is natural, and we are not surprised to learn from Prof. Tyndall that this expansion of the air, at such a rapidly increasing rate, with increasing elevation, is accompanied with a loss of a part of its humid contents.

I have shown that the earth has four times the capacity for absorbing heat as water, and how in high regions, surrounded by mountains, turned up as it were, and presenting their surface to the sun, the absorption of heat goes on very rapidly, and quickly warms the enclosed plateau. The *degrees of heat* are, of course, correspondingly *great*, and would so be felt at low altitudes, especially when laden with moisture; but on high plateaux of 6,000 feet, where, in the natural course of things, it ought to be cold, *the higher degrees serve to cancel the one degree of Fahrenheit of reduced temperature for each* 300 *feet of elevation, and thus what is thermometrically great will convey only the sensation of comfort.* Thus, at 6,000 feet, we would have: At 92° Fahr.

in the shade, the sensation conveyed the same as if it was 72°, minus any appreciable moisture, and plus all the beneficial effects of the intense sunlight. In winter, should the thermometer indicate zero, this would be felt as if it were 20° to 25° above zero, with the same addition of light and rapid warming of the earth's surface as soon as the sun rises, and its rays pass unobstructed through the rarefied atmosphere.

Or, to make my meaning still plainer: For each 300 feet of increased elevation the temperature is reduced about one degree of Fahrenheit. The heat of summer, therefore, (as indicated by the thermometer) would be the same at 6,000 feet as at sea-level, but for this reduction of one degree for 300 feet, which at 6,000 feet is equal to twenty degrees. In winter, the thing is reversed: On the one hand, a low temperature, as indicated by the thermometer, but not by our sensations. These are largely governed by the relative amount of moisture. So, we have, on the other hand, as an off-set to the thermometrical showing: Absence of moisture, almost continued unobstructed rays of heat and light, which have to penetrate no mist before reaching us, a more than double expanse of surface absorbing the heat (by the up-turned sides of mountains), and the protection against winds which these latter afford.

The *absolute humidity* in high altitudes is likewise less than in the lowlands; that is, this rarefied air, with three pounds of pressure to the square inch less than in the lower altitudes, has a diminished capacity for holding moisture. Thus, in Denver, (I quote from a statement by Dr. Dennison) the average cubic foot of air contained 1.13 grains of vapor at a mean temperature of 33°, while at Jacksonville, Florida, during the same time (five cold months), there were 3.92 grains of vapor to the cubic foot of air at a mean temperature of sixty degrees.

High altitudes, therefore, enjoy remarkable dryness throughout the year. And nowhere is this the case more than in Colorado, with its high and varying altitudes throughout the whole of the State. So great indeed is this

dryness, that the limited amount of rain-fall, including snow, which rain is, moreover, rapidly absorbed by the sandy soil, barely suffices to supply the necessary moisture for the scanty indigenous vegetation.

Again, I cannot too often recur to that greatest of features in the high altitudes of Colorado: The wonderful and uniform clearness of the air, as shown by the intensity of the sunlight. So clear is the air, and so intensely blue the sky, that, for the first few days of a stay in Colorado, you find it to your advantage to wear smoked glasses.

In regard to dryness of the atmosphere as one of the factors in the treatment of phthisis, the opinion expressed by Dr. C. T. Williams, of England, represents the accepted idea: "*It has been shown that, taking collectively all forms and degrees of phthisis, the dry climates are the most likely to arrest the disease.*"

Take, on the one hand, the effects destructive of life, such as we find them in mines, cellars, and ill-lighted abodes, and on the other, the benefits of sunlight at low levels, where a stratum of moisture intercepts the sun's rays like a thin cloud. Take away the moisture and the interception of the sunlight, and we have the unobstructed full effect of a sun-bath in the highlands, as found in Colorado. The sun's rays being less obstructed, two effects are produced:

First. Much more rapid taking up of warmth by the earth, presenting as it does, with the mountain sides, a largely increased expanse of surface,

Second. The sun shining unobstructedly in a *usually cloudless sky* (cloudless far in excess of other sections of the country), there is a proportionately *longer* influence of sunshine in each twenty-four hours; the sunlight, likewise, is more *intense* because steady, by being, as it were, undisturbed. Thus, we have, even on days during which the sun would be clearly visible for eight hours only, a sun-bath which in its *intensity*, *purity*, and *fullness of effect* makes up for the little deficiency in time, and may be said to have *fully double the effect on the human system than on the plains below.* It is for this reason that Dr. Dennison feels

justified in setting forth as a maxim that: "The beneficial effects of sunshine increase with increasing altitude."

Atmospheric Electricity.—We know more of electricity as a therapeutical agent than we do of the element itself. Among the established facts is, that electric tension in the atmosphere is increased with each decided elevation. Excepting during storms, when the atmospheric electricity is negative, we have it from extensive observations, that when the sky is clear the electricity of the air is always positive. Dr. Dennison says: "It would seem that with the increase of tension due to elevation, the positive electricity of the air, so abundant in dry elevated regions, would be constantly nearing the negative electricity of the earth." The high electric tension of high altitudes is no doubt due to this, though we have no other proof of this than our own nervous sensations. Houses, trees, and all other shelters for the human race only serve to intercept this vital fluid.

In outdoor life, there is no hindrance to its full action, and the human body is the receiving medium between the positive electricity of the air and the negative electricity of the earth. This fact, too, is a plea in favor of sleeping on the ground in open air, because "you *get up in the morning from your negative electric bed to stretch yourself in the positive electric air.*"

Of *ozone* as a curative power, nothing is known, and its utility is a matter of speculation. What is known is, that in Colorado as well as at other great altitudes, the increase of ozone in the mountains is shown, as compared with the plains below.

Winds.—As a general thing, a moderate amount of wind has a decidedly healthful influence in keeping the air in motion. A rapidly moving, chilling wind, alone can be of harm to the human organism, by the too rapid reduction of the temperature of the external surface of our bodies. In such high regions as the Rocky Mountains, the general movement of the air is, of course, greater than in the lowlands, but the difference is not so great as one

would suppose, excepting on high, exposed plateaux, chiefly the so-called divides, where the force of the wind has it all its own way. The topography of the country, on the other hand, the variety of shapes and relative position of mountain ranges to each other, naturally brings about a great variety of strictly local conditions. The predominating features are the more or less limited high plateaux, for the greater part (two-thirds to three-fourths) surrounded by mountains, which break the force of the winds. Luckily too, this protection is chiefly in the north and northeast, from which directions the most disagreeable winds are to be expected. For, as a rule, it may be set down for the eastern slope of the Rocky Mountains in Colorado, that the south, southwest and west winds bring pleasant weather, while their opposites, the north, northeast and east winds bring most of the rain.

Again, it should be borne in mind that the winds in these high altitudes, though moving with the same rapidity as on the plains, *exercise much less force on account of the reduced weight of the atmosphere, due to elevation.* So, while purifying the air and changing it, the force of the wind does not suffice to create discomfort by rapid cooling off of the outer man, nor exercises any chilling effects upon the respiratory mucous membranes of the inner man.

The general effects of *altitude* on man are well understood, when we consider the lessened pressure of the air-column, which exists at great elevations. The surface of a man's body may be said to be sixteen square feet, and the pressure of the air-column upon a square centimeter of surface at mean barometric pressure 1033 grammes.

At the height of 6,000 feet (the average height of the foot-hill plateaux of Colorado), the surface of the human body is relieved of a pressure of three pounds to the square inch, which is equal to 7,000 pounds for the whole man. So much for the outer surface. The respiratory mucous membrane of the lung has been calculated by Lieberkuehn to be 1,400 square feet. The lungs are the organs chiefly influenced by the reduced pressure of the air-column,

whereby primarily *increased activity in breathing* is brought about, which in turn secondarily influences the centres of circulation, assimilation, and innervation. In a comparatively short space of time, these functions will have accommodated themselves to the change. The proportions of oxygen, nitrogen, and carbonic acid are the same at high altitudes as at sea-level. At the height of 6,000 feet, where the pressure of the air-column is diminished one-fifth, a given space of air will, of course, contain one-fifth less of oxygen, and, therefore, at first the lungs must inspire a fifth more of air to get the same amount of oxygen.

The oft-disputed question, whether *increased frequency of respiratory movements, or greater profoundness in breathing* makes up this one-fifth deficiency, is best decided by first examining the known effects of inspiring rarefied air, and expiring into it, at low altitudes. These effects can be summed up as follows: First. The muscles of inspiration are strengthened, inasmuch as the atmospheric pressure in the lungs is lessened, while that on the surface of the chest remains the same; second, there is a greater determination of blood to the lungs from relaxation of the tension on the tubes and air-vesicles. This relaxation allows the lung to contract in the exhaling process, and by expulsion diminish the amount of residual air. Let it now, for a moment, be kept in mind, that this *increases the capacity for taking in of air;* third, the blood being determined to the lungs, the left heart is relieved somewhat from pressure, and this causes, as we know, at first, rapid action and softness; fourth, elimination of carbonic acid is favored, because of the diminished density of the inspired air. So we have of *immediate* effects: Increase of venous blood in the lungs, rapid action of heart, increased riddance of carbonic acid, and increased room in the air-vesicles for fresh air. Now let us first, and entirely overlooking the permanent effects for the present, transfer these facts to our high elevation, where we also inspire and expire into rarefied air, but with the difference from the foregoing, that now the pressure on the outside of the chest is *diminished* (for convenience

sake we will say one-fifth). Then we will get of immediate effects mentioned above, only those which are caused by a rather sudden change from a denser to a rarer medium. And these effects are always temporary unbalancings of the functions, are *disturbances of innervation*, pure and simple, manifested by rapid breathing and accelerated heart's action. Increased rapidity of propulsion causes not merely fullness of bloodvessels in the lung, but *drives the blood into and through the capillaries;* it begets a *determination to the periphery*, as any one can notice upon himself before he has been in Colorado many hours. Let us say then, that lungs and periphery (lesser and greater circulation both) are in a *temporary state of venous fullness*, caused by a disturbance of innervation of lungs and heart from an unaccustomed change from dense to rare medium. The lungs will rid themselves first of this stasis by taking in oxygen. But the peripheral stasis can only be permanently relieved after the left heart has acquired more force of contractility by oxygenated blood, and the right heart is no longer crowded by backward pressure from the lung. Of course, I am fully aware that such conditions cannot exist for any great length of time, and I have taken care to speak of them as "temporary." Yet, both the capacity of the system for standing changes of any kind for a length of time, as well as that the compensating hypertrophies (heart), and dilatations (air receptacles, and subsequently chest-walls), take place in a comparatively short space of time, are facts too often overlooked. *The stasis is soon compensated for, and answered by* dilatation of the capillaries, and their consequent increased capacity for holding blood. In inspiration of rarefied air at sea-level, carried on through a number of months, daily, the effects outline the respiratory act, and in a measure beget hypertrophy of the heart's muscle, and a moderate expansion of air-vesicles, through increase of their contractility. Eventually, however, the outside pressure of the air-column will regain its supremacy sufficiently to cancel most of the benefit derived. Not so in the rarefied air of high altitudes, where

the pressure of the air-column is at all times reduced, barely disturbed by any rise of the barometer, because moisture is wanting. Here the permanent conditions will bring about permanent changes, to-wit: Hypertrophy of the muscular tissue of the heart, and distension of the pulmonary respiratory membrane as represented by the air-vesicles.

Now, let us not forget that the endosmotic action of oxygen through the lung-membrane is of a *more rapid and thorough kind* in the clear, rarefied air, the very rarefaction of which is a guaranty for its ready passage through membranes. The increased elimination of carbonic acid, at first due to determination of a larger quantity of blood, and answered by increased absorption of oxygen through more rapid inspirations, is now answered by deeper and fuller inspirations, and the taking up of the same quantity of oxygen as before. As soon, then, as increased frequency of respiration and heart's action approach the normal once more, to be supplanted by deep, full respirations and regular but more powerful heart's action, we are justified in believing that the *respiratory function has adapted itself to the change of elevation.* Dilatation of the capillaries and expansion and tension of the air-vesicles with their sub-structure of elastic tissue have now become permanent, as evidenced by enlargement of the circumference of the chest.

To recapitulate: THE LESSENED PRESSURE OF THE ATMOSPHERIC COLUMN FROM WITHOUT IS ANSWERED BY INCREASED ACTIVITY OF THE ORGANS WITHIN, WHICH RESULTS IN HYPERTROPHY OF THE MUSCLES OF THE HEART, FULLNESS AND SUBSEQUENT DILATATION OF THE PULMONARY AND PERIPHERAL CAPILLARIES AND EXPANSION OF THE AIR-CELLS. THESE CHANGES BEGET PERFECT ADAPTATION TO THE CHANGE OF ELEVATION, AND RE-ESTABLISH THE EQUILIBRIUM PREVIOUSLY EXISTING BETWEEN EXTERNAL AND INTERNAL FORCES.

This explanation readily accounts for the varied effects upon the circulation of different persons, and chiefly as

regards cases of hæmorrhage from the lungs. Every individual, whether safe and sound or afflicted with disease, has to pass through—first, the *functional* changes, and second, the resulting *organic* changes. The character of the tissues of the heart and blood-vessels will determine the issue in each case. For the great majority, even of sick persons, great reliance may safely be placed upon the wonderful adaptability of the human organism to all manner of changes. But a heart loaded down with fat, blood-vessels whose elasticity has been impaired by atheromatous changes, calcareous deposits, or when resistance to the pressure of blood is diminished by syphilitic or scorbutic changes, or the hæmorrhagic diathesis (more frequent than is generally allowed); stumps of occluded vessels, from whose mouths hæmorrhage has occurred before—all such may give way under the increased pressure, and a hæmorrhage be the result. This speaks for the safety of the plan of slowly and gradually crawling up toward high elevations. At the same time a slight hæmorrhage need not necessarily be fatal, and will in all human probability not occur again. The time spent and lost in reaching the proper altitude by very slow stages, may prove fatal. Where no hæmorrhage has taken place in some months, the danger of a sudden change cannot be so great.

As before stated, the altitude of approximate immunity from phthisis is required to be higher the nearer we move towards the equator, and it has been asserted by Brehmer to be equal to 300 feet of rise to every degree of latitude. Such a calculation would not amount to much in itself, were it not in consonance with the total absence of phthisis among the inhabitants of these increased altitudes. The altitude of immunity in Colorado, has been found, by the necessarily limited observations thus far at hand, to be 6,000 feet. A great portion of Southern Colorado and its high plateaux on the eastern slope of the Rocky Mountains have an average altitude of 6,000 feet and somewhat above. According to surveys by Professors Parry, Hayden and others, the following altitudes are correct:

Average elevation of foot-hills, about 8,000 feet. Summit of the range, 11,500 feet. Timber line, from 11,800 to 12,000 feet.

For convenience sake, I divide the plateaux and localities under three heads:

First. Among the foot-hills, and ranging from 4,000 to 7,000 feet. Of such are Boulder (5,536 ft.), Canon City (4,700 ft.), Colorado Springs (5,975 ft.), Denver (5,317 ft.), Manitou (6,124 ft.), Pueblo (4,400 ft.), San Luis Valley (6,400 ft.).

Second. Higher plateaux among the mountains of average height and below timber line, from 7,000 to 11,000 feet. Here we have Manitou Park (7,752 ft.), Middle Park, head, (8,690 ft.); Estes' Park (7,528 ft.), Morrison (9,842 ft.), Hot Springs (7,725 ft.), Georgetown (8,466 ft.), Montezuma (10,113 ft.).

Third. The elevated prairies of Western Kansas and Eastern Colorado, which might be designated as approaches to the Rocky Mountains, and with a continual rise from 2,000 to 5,000 feet. Among these I will mention Lachine, Kansas; Kit Carson, Colorado, (4,191 ft.).

The elevations above timber-line consist of the solitary peaks of great altitude, such as Pike's Peak (14,436 ft.), Mt. Lincoln (14,183 ft.), Mt. Wright (11,800 ft.), Long's Peak (14,300 ft.). These altitudes are not for consumptives.

Let me now summarize the general facts in regard to high altitudes and their utility. Part of the conclusions are derived from Dr. Denison's instructive monogram.

1. Cool and dry are better than warm and moist climates.

2. The only favorable attributes of low altitudes, dryness of the air and diathermancy, are found multiplied in high altitudes.

3. The uniformly warm climate of southern regions, (Florida, Bermuda Islands etc.), with their high thermometrical reading without noticeable falls, is at last beginning to be recognized as relaxing, depressing and enervating factors, for which its equableness is no compensation.

4. The moist, salt air of sea-coasts is beneficial to the consumptive only in its purity and absence of malaria, but decidedly harmful in the too frequent absence of continued sunshine, and that greatest of factors necessary for consumptives, *uniform withdrawal of the watery constituents of the body* at large and the lungs in particular.

5. Almost any change of locality and climate, differing from the home climate, is of *temporary benefit* to consumptives, as well as to other folk. But consumptives have no time to fool away. It is this temporary benefit upon which is founded that monstrous assertion that miasmatic sections had been found to be a paradise for consumptives, and *vice versa*.

6. The benefits of high altitudes are not contained in the one factor of low barometric pressure, as still adhered to by Brehmer. The three chief factors are doubtless the three imponderable agents, *heat*, *light* and *electricity*, with their separate and combined influences on the human organism, consisting, broadly stated, of rapid change of tissue and strengthening of functions, with consequent strengthening of organs by gradual accommodation and adaptation.

7. The detailed requisites of high altitudes, in order to derive benefit therefrom, consist of

(*a*) Rarified air. Pressure of the air-column must be reduced from one-sixth to one-fifth.

(*b*) Heat-rays of the sun coming unobstructed through rarefied atmosphere, quickly warming the earth's crust.

(*c*) Rays of light should be equally unobstructed, giving a steady and intense light, a uniform sun-bath.

(*d*) High mountains, enclosing upland plateaux from two-thirds to three-fourths of the circumference, sheltering them from strong winds, and adding vastly to the expanse of earth warmed by the sun.

(*e*) Increased electric tension. The undoubted benefit derived from the positive electricity of the air, and the negative electricity of the earth, with the patient as a medium.

(*f*) The presence, within reasonable reach, of pine forests, for the benefits derived from inhaling their odors. Also, other plateaux, to the north and south of the chosen one, for changes in summer and winter. The most preferable would be one of somewhat increased altitude to the north and of lesser to the south.

(*g*) Moisture, just sufficient to keep the land from becoming a desert; in other words, a limited rain-fall throughout the year.

All of these requirements and their attendant benefits are to be found along the eastern slope of the Rocky Mountains, extending through Colorado and parts of New Mexico and Arizona. The same conditions on the same gigantic scale are nowhere else to be found.

Coming to look at the seeming disadvantages, as they would appear to laymen, and as sometimes complained of by patients during the first weeks of their sojourn in Colorado, we find the following:

Frequent rains. This frequency is deceptive. It may rain on three successive days for one hour each day, which occasionally occurs as a sequel to three weeks or more of uninterrupted sunshine. The quantity of actual rain-fall by inches is barely sufficient to sustain vegetable and animal life, and is so rapidly absorbed by the sandy soil and taken up by the dry air, that often after a severe shower, no trace of moisture is left on the ground or upon the leaves of undergrowth in a couple of hours.

Occasional short-lived winds. The motion of the air is at all times barely sufficient to aid in purifying the air and changing it.

Let it be remembered here, that sudden changes, which do not occur often, nor create persistent change, are of decided benefit for all classes of chronic diseases. *Constant* dryness is anything but a desirable factor.

The cold weather is not felt as such, a fact previously dwelt upon. On account of the absence of moisture, the lowness of the temperature exerts only its tonic influence. It is in the winter, therefore, that most *cases of*

consumption reap the greatest benefit, the air being then extremely dry and highly electric, with no rain and very little snow. The thermometer shows great variations between day and night, sometimes going below zero; but, as before stated, the absence of any appreciable amount of moisture and the shelter of the hills, prevent any depressing influence from the low temperature being felt. With a moderate quantity of woolen clothing, only the bracing, tonic effects upon the human body are experienced. During the day, from 10 till 4, *the sun shines almost uninterruptedly*, and with such power as to enable the invalid to enjoy out-door exercise without additional wrap or overcoat.

The hill-sides do not, as has been too frequently asserted by medical men, also, act as a screen to the sun's rays, but *as a trap, concentrating their effect.*

I have no doubt that future experience will show the necessity of dividing the therapeutical directions under three general heads, as regards the primary disposal of patients:

1. Those in whom infiltrations not yet exulcerated, catarrhal processes consequent upon the foregoing and atelectatic lungs supervene, where the trouble is chronic and without very active tendencies. Includes chronic interstitial pneumonia. Such patients may likely have to reside in Colorado the greater part of the year, and yet be able to be at home the rest of the time. They can probably go to the elevation of 6,000 feet at once.

2. Those in whom destructive processes have begun, *limited, rather well-defined cavities* have formed, including bronchiectatic conditions and cheesy infiltrations; such in whom the sub-acute processes are still manifested by fever, but have not yet reached the colliquative stage, yet in whom there exists a constant tendency to conditions which disturb the balance of health, might begin with 4,000 feet, and in accordance with their more or less rapid improvement change to 5,000 or 6,000 feet.

3. Those in whom destructive processes are decidedly active; who have reached the colliquative stage;

where the destructive tendency has recently been manifested by *hæmoptysis;* finally, those afflicted with *acute miliary tuberculosis* (though now considered hopeless cases) might travel by slow stages through the gradual rise in Kansas, and remain a month or two at choice localities, such as Lachine, Kansas; next, go to Denver or Greeley, and from thence to Manitou.

The first two or three months of rational treatment would readily determine which of the second and third class would have to make Colorado their permanent home.

On a previous page, I have intimated my belief, that the three imponderable agents, HEAT, LIGHT, AND ELECTRICITY, IN THEIR COMBINED ACTION, SERVE TO STAY THE DISINTEGRATING CHANGES OF TISSUE IN THE HUMAN ORGANISM, AND THUS PAVE THE WAY TO THE CURE OF CONSUMPTION.

I now re-assert this as a theory upon which the therapeutics of phthisis will, in my opinion, be based in the future. The high elevations, and the rarefied atmosphere previously referred to, are free from all baneful influences in the three forms in which matter presents itself, namely: *solids, fluids, and gases.*

They are free from: *Dust* (as a solid), excessive *moisture* (as a fluid), and from *intoxicating vapors* (representing the gaseous form).

In the relatively total absence of these baneful influences at high elevations, the life-giving and life-sustaining agencies of heat, light, and electricity can and do have full and uninterrupted sway. We see, therefore, that it is on high, upland plateaux, far removed from large bodies of water alone, that these agents can exercise their powerful curative influence upon the human system to its fullest extent. In what way, I have pointed out. In how far these forces operate, by being converted into each other, is a matter for future investigation and speculation.

Now, if I insist once more upon the correctness of my theory concerning the cure of phthisis, it is because I am thoroughly convinced that it will prove to be the solution of the great problem of the proper therapeutics for all

forms of consumption. When once the use of the imponderable agents has been reduced to something like a system, by careful observation of their effects upon different forms and stages of phthisis pulmonalis, I am confident that this theory will be found to cover the whole ground. By careful individualization, and strict attention to detail in the therapeutical application of heat, light, and electricity, every form of consumption will finally be treated successfully on a scientific basis.

So important does it appear to me to have my theory well understood, that, at the risk of its being voted as tedious, the whole matter is here condensed once more, and the points presented in proper succession:

1. The products of phthisis are either *hereditarily scrofulous* or *directly inflammatory*, and are respectively known as: *hyperplusia of connective tissue*, *cheesy degeneration*, *and tubercle.*

2. When found in the lungs, we look upon them (generally speaking), as products of lessened and retarded nutritive changes in the lungs, caused by an *insufficient supply of blood* and its *consequent stagnation* from lack of central propulsion. These conditions may aptly be termed, "*increased venosity.*" Now, the vitality of a part being lowered by the amount of venous blood in it being out of natural proportion to the arterial, the nerves do not act sufficiently upon stimulation. For this reason, we find mucous membranes, which, in a state of proper vitality, secrete their special fluid in due proportion to the stimulus applied, and shed and renew their surface in exact proportion to the nervous influence they receive, acting irregularly in this respect. They now show little and imperfect re-action after the nerve-influence, which is natural to them, remaining sluggish and secreting an excess of fluid, and when more than ordinarily irritated are found to shed their coat unduly.

3. The accepted great therapeutical measure for the removal of these products by expectoration and absorption is the removal of patients to high elevations, where

the pressure of the air-column is reduced from one-sixth to one-fifth.

4. The curative influences of high elevations have been attributed by Brehmer to this lessened barometric pressure alone; in other words, to the effects of rarefied air. This has been ridiculed by other writers, but not successfully contradicted in the absence of other explanations.

With these facts in view, my deductions from them are as follows:

1. The healthy lungs, to properly perform their function, must have *pure, unadulterated air*. The infiltrated lung requires rarefied air, because by reduction of outside pressure alone, can the propulsive power of the heart be increased, and thereby overcome stagnation.

2. We next ask ourselves, why is this atmosphere unadulterated? Because of the proper action of *heat, light* and *electricity*, which agents manifest uninterrupted power through an almost purely unobstructed medium. It is unadulterated by dust, excessive moisture, noxious gases; representing in turn the three forms of matter: solids, liquids and gases.

3. The three imponderable agents have full play. Heat manifests all its beneficial effects upon the human system by that most important of regulating factors, withdrawal of water from the tissues of the body. Heat at high elevations is not restrained from diffusing itself by its various ways of transmission, radiation and convection. The rays of light pass unobstructedly through an ether of intensest blue, and consequently beget the nearest approach to white light at the proper elevation. Its distribution by radiation, refraction, etc., is untramelled. The effects of electricity at high altitudes manifest themselves in increase of ozone for breathing purposes, and in the positive electricity of the air, with its effects upon the human body as a medium between it and the negative electricity of the earth.

4. In addition, I hold that an upland plateau for therapeutical purposes must have three qualifications in order

to escape dust, moisture and gases: *Elevation* sufficient to exclude all dust not of its own local origin; *mountainous surroundings*, sufficient to break the force of winds and the noxial carried by them; *inland position*, removed as far as possible from the seas or any great body of water. Upon this latter point I lay particular stress, and insist, that any elevations still reached by moist sea-currents are not ideal health-resorts for consumptives. Thus any of the high altitudes west of the divides in the Rocky Mountains, as well as those of the Alleghany Mountains, are, though far removed from, still too near to either ocean or the Gulf of Mexico.

Both *sea and mountain air* are known to encourage and promote rapid change of substance, although they differ in the *modus operandi*. Both are subject to irregular variations of the barometer, as they are known to occur rapidly, and of short duration, both at the sea-side and in the mountains.

In contradistinction to wide plains, where slow changes of the barometer indicate equally slow and long-lasting rains, the sea-shore and the mountains have rapid changes, with rain of very short duration. These changes, once considered as productive of evil, are now known to be essential to the highest condition of health.

There is no doubt that *rapid changes of short duration are more favorable for the more important functions of the human body than relative stability*. We cannot endure either constant dryness or dampness, and since, therefore, barometric changes are necessary, such changes as take place rapidly, and having supplied the absolutely necessary amount of moisture only, equally as rapidly return to the normal and usual standard, must be of benefit to invalids.

These conditions are shared by sea-shore and mountains, as above stated.

The difference in action between sea and mountain air is now to be considered, of which Dr. Brown says, in substance:

Sea air acts rapidly, mountain air slowly; sea air very

soon compels a more increased ingestion of food, stimulates digestion powerfully, so that the bodily weight is considerably increased in a short time. Mountain air, on the other hand, acts as a more subtle, slow stimulant, exerts its influence beneficially on enfeebled bodily functions, and their naturally increased irritability. Sea air pre-supposes robust assimilative functions and equally robust integrity of the functions of the heart and lungs, however anæmic or otherwise enfeebled a person may be, if only their *circulation and nervous system are sufficiently above par to bear the strong stimulant.* Mountain air exercises a calming and indirect, quite gentle influence on the atonic and catarrhal conditions of mucous membranes, and, however persons may suffer from weakness with increased irritability, it will act slowly but surely beneficially, if only the circulation and nervous system are still *capable of responding to the gentle and scarcely perceptible influence of mountain air.*

I have stated my conviction (in which I am confident future statistics will bear me out) that dryness of the atmosphere, to be of lasting benefit to consumptives, must be as nearly absolute as possible, relieved by moisture only to the extent of keeping up limited vegetation. And such moisture must not be lingering, as, for instance, in the shape of dew. The average distance of localities in Colorado from the Gulf of Mexico is 800 miles, while the Atlantic and Pacific oceans, respectively, are more than 1,000 miles away.

Now there is, therefore, extraordinary dryness of atmosphere, which is only temporarily relieved during the summer months by occasional short-lived thunder storms. Nature supplies most excellent drainage, and water falling upon level ground is rapidly absorbed by the gravelly soil. In his pamphlet on the advantages of Manitou, in Southern Colorado, Dr. Solly says: "The buffalo grass forming a thick, dense sod, rapidly sheds the rain-fall, the surface water being carried away by the gulches and water courses, thus leaving an inappreciable amount of moisture to be taken up by the atmosphere. It is unquestionably owing

to the proximity of this enormous volume of dry air that *none of the evidences of damp are encountered at Manitou*, even in those occasional seasons, when the rain-fall is considerable.

Glancing once more at what at the present day we would consider our ideal of an elevated health-resort for phthisical patients, there is not one requirement that is not satisfactorily found in Colorado, and at some of its choice spots, such as Manitou, in particular. Let me rehearse these requirements and their fulfillment once more. In establishing certain facts it is utterly impossible to avoid repetition, and I condense as much as practicable.

1. High upland plateau, covering a considerable expanse of territory, the approach to which shall be a gradual rise, and with altitudes likewise extensive, which answer to the elevation required for immunity from phthisis in that latitude.

2. This plateau must be sufficiently far removed from the high seas or lakes of any size, in order to be entirely free from moist currents.

3. Occasional passing thunder storms of short duration are sufficient sources of moisture.

4. The plateau must not be above timber-line, or close to the snow-line. The presence of pine forests is a desirable object.

5. It must be sheltered from two-thirds to three-fourths of its circumference by mountains sufficiently high to protect the plateau from strong winds, but not high enough to render it shady. No straight pass or canyon should be situated at the entrance to the plateau, nor should it be traversed by a very frequented highway, where dust abounds.

6. The natural drainage of the plateau should be perfect, the soil sandy, firm, mixed with gravel.

7. A natural water-course of melted snow from the mountains in rapid motion and with rocky bottom.

8. Total absence of noxious vapors. Proximity to a large town should be avoided, and the plateau itself should

be so constituted as to preclude the possibility of a town of any size growing upon it.

9. A commercial centre of sufficient dignity, to serve as a base of supplies, to be within reasonable distance.

10. Other plateaux, or upland parks, within reachable distance, both north and south, to serve as a change for invalids in summer and winter. Also, variegated scenery in the more immediate neighborhood.

11. The plateau should be sufficiently open to admit of the greatest benefit being derived by the heat and light rays of the sun, so as to enable the invalid to have a sun-bath for not less than nine hours in the summer, and seven in the winter.

12. According to observations of several years past, one of the requisites is that the number of clear days shall approximate three-fourths of the 365 days in the year.

13. The variations of temperature should not exceed twenty degrees during any one of the four seasons of the year.

14. An average barometric pressure of twenty-four.

15. Presence of an increased quantiy of ozone in the atmosphere, engendered and replenished by the thunder-storms of short duration.

All of the general requirements enumerated, are found in Colorado, and the local ones in a number of localities in the northern, middle, and southern natural divisions of the State (north, middle, south, San Luis Parks).

A short rehearsal of the *disadvantages*, as they appear to the uninitiated, and form the basis of more or less frequent complaints, will not be out of place here:

First. The sudden changes, short as they usually are, are a prime necessity, constant dryness not being desirable.

Second. Cold weather, *at any season* (I refer to the sensations of invalids), is only bracing, and moisture, which some persons claim to be sensible of in various parts of Colorado, is absent.

Third. High degrees are not felt as such (90° Fahr. and upwards), moisture being rapidly withdrawn from the

body. This deficiency needs replenishing, and insures constant and rapid nutritive changes.

Fourth. Openness of a plateau to the northeast, towards the plains, brings no harmful winds, but plenty of pure, unadulterated, rarefied air from the high plains.

The only objections which hold good are the spring and autumn equinoctical changes, which, however, are of short duration. These occur all over the globe, of course. At such periods patients could make the changes previously mentioned to northern and southern localities, or else remain where they are, as their condition at such time would seem to indicate.

DOCTORS AS MINISTERS OF THE LAW.

By Judge L. B. Valliant, St. Louis.

Lawyers often claim for the law, that it is the most comprehensive science of all, embracing and absorbing all the other sciences. But upon a close examination of the merits of this claim, it will probably be found to have no further extent than this, that the law, in its enlightened application, draws to its aid all other sciences, and makes free appropriation of borrowed wisdom.

Forensic medicine is not a science in itself, but is only an application of the science of medicine to the assistance of the science of government. Its distinctive feature, therefore, as a branch of the medical science is in the application of that science to the given subject, in shedding upon its often obscure and difficult path of government the light of its wisdom and experience. In such an application, the physician is still the doctor, and the body politic is the patient. Therefore, as an intimate knowledge of the natural body, with its wonderful mechanism, is necessary to enable a physician to understand its requirements, and minister to its wants, so a knowledge of the

political body is also necessary to enable the healer to apply the remedy.

There is this difference, however, between the two patients: Whereas, the one is physical, the other is metaphysical, you must supply the one with medicine, you must supply the other with wisdom.

Upon the theory that the human mind is capable of unlimited development until it may reach absolute perfection, we may imagine man, in the remote future, knowing all the laws that affect his physical being, and giving them strict obedience, then the science of material medicine will fall into disuse, and life and health will be preserved as a consequence of the knowledge which man has of his own being.

Government, in theory at least, is a perfect science, and professes to observe all the laws of nature which affect its well-being; but there are laws which government must learn from other sciences, and prominent among those is the science of medicine, or rather all those sciences which, in this country, are commonly attributed to the medical profession.

The true relation between the government and the man of medical science, when the latter is called upon to aid in the administration of the law, is not universally understood or appreciated, and much of the embarrassment that physicians feel in that relation, arises from the fact of this mutual want of understanding and appreciation.

When the physician comes to regard the law in the light of his august patient, seeking, in good faith, the light of his wisdom to aid it in regulating the rights of individuals and communities, and when the law comes to regard the physician as its instructor in those sublime branches of learning which belong peculiarly to his profession, and accords to him a just position as such, the embarrassments and unpleasant features now experienced will cease, and the contact will be an intellectual communion of enjoyment between doctors and lawyers.

The unfairness with which physicians are now treated

in courts must have been the source of painful experience to the profession, and is by no means creditable to the law.

To call a physician suddenly from his office, or from the bedside of a patient, and place him upon the witness stand, and ply him for hours with questions of the most abstruce character, upon branches of his profession that he has, perhaps, not been called upon to investigate for months, and require him not only to answer them intelligently but (what is often more difficult) intelligibly to men of very ordinary understanding and education, cannot but shock, with its unfairness, any refined and cultivated mind.

The vulgar regard the science of medicine with much superstition, and with them the knowledge of a physician is supernatural. When that spell is once broken, all confidence is gone; they do not credit him with ordinary human falibillty. So that when a physician caught up on a witness stand without preparation, and subjected to extraordinary cross-examination, which is probably intended only to confuse, is unable to explain a matter to the comprehension of his hearers, he loses nothing, perhaps, in the instruction of the intelligent, but his usefulness with the larger portion of his audience is impaired.

Men of science are usually diffident, or, if bold at all, are only bold in the particular branch of their science. Hence, although from the earliest history of our law, physicians have been used in its aid, little effort has been made to give them a position in the courts commensurate with their merit. This is because they generally take no part in the making of laws themselves, and have not sufficiently asserted their own importance before the legislatures.

If the situations of the two professions were reversed; if an inquiry, for instance, in the nature of a coronor's inquest, or of an issue *devisavit vel non*, or of a *de lunatico inquirendo* were submitted for determination to a board of physicians, and they finding it necessary or convenient to summon

lawyers as expert witnesses on matters of law, and placing lawyers one after another upon the witness stand, develop all their contrarities of opinion growing out of the abstruce questions of law involved in such inquiries, the legislature would soon have its attention called to the subject, and a system would be adopted by which the ends of justice in such cases would be more certainly met, and a less embarrassing method would be devised of shedding the necessary legal light on the given subject. This would result, very naturally, because lawyers generally make the laws, or at least suggest them to the legislatures, and whilst the writer would not be understood as intimating that lawyers are less diffident than doctors, yet when so inconvenient a feature in the administration of justice as the one just supposed, is in that forcible manner brought to the attention of the bar, it is believed a remedy would be very speedily suggested.

In the trial of ordinary cases at law, the presiding judge gives the jury all the instructions they require on questions of law. The judge will inform the jury that if the facts are thus, the law is so, and their verdict must be accordingly. Should there be any doubt as to the law, or a difference of opinion between lawyers on the subject, they do not subject the judge to an examination, or ply him with questions as to the matters of legal science, but they present their views of the law to him in a legal argument, and fortify them with such books as they may, and then, with the aid of the arguments and authorities so presented to him, the judge writes his opinion, in the nature of an instruction to the jury, on the given question, and that ends it so far as the trial in that court is concerned. The instruction so written becomes a part of the record in the case, and may be reviewed by the Supreme Court, and, if found to be erroneous, will be corrected, and the cause remanded for trial again under the light of the corrected instructions. It not unfrequently happens, in the trial of a cause, that a judge, before passing on a question of law, will take the subject under advisement, and retire to his library for examination and study.

Now, in all the cases in civil and criminal law which involve questions of medical as well as legal science, there should be as much care and deliberation in ascertaining the correct principle in one as in the other, and as fair an opportunity should be afforded for the examination and discussion of the one as of the other.

It is as important and as delicately scientific a question to know whether a given state of facts show a man to be under an insane delusion, as it is to know what is the legal consequence of his act, when committed under such delusion. The man of medical science, who, from his learning and experience, is enabled to instruct a jury that if they find from the evidence that the facts are of such a character they should conclude that the person in question is insane, is as important a factor in the administration of the law as, and should be of equal dignity with, the judge who instructs the jury, as a conclusion of law, that such a person is incompetent to transact business, or is not responsible for his act.

There is another feature of personal injustice to the physician prevalent in the present practice, which it is, perhaps, only necessary to mention: that is the absence of any provision in our law for adequate compensation for his service rendered in courts.

Every citizen owes certain duty to his goverment, and may well be called upon at times to render service without compensation, or at least without adequate compensation, but that service ought to be uniform, and such as may be required of any citizen. The intellectual treasury of a physician should no more be appropriated to the public use, without adequate compensation, than the material treasury of a banker.

But the unfair method of examining medical witnesses, as viewed as a matter of personal injustice to them, is by no means the chief objection to the present system, or rather to the present want of system.

The object of all judicial inquiry should be to ascertain the best information on the subject at bar, and sure it is, a

more loose, uncertain and unsatisfactory method could scarcely be devised than the one we now have for obtaining scientific testimony.

With all the guards that a high-minded and cultivated faculty can, in our land of liberty, throw around their fraternity, they cannot keep unworthy men from being admitted into the profession. As the law now is, either party may select his own expert witnesses, and all licensed physicians are equal before the law. In case of conflict of opinions, the jury are to judge which they will adopt. It may be that, between two most worthy and scientific physicians, a decided difference of opinion will exist, or it may be that we will have on our hand the opinion of a learned physician, and on the other the opinion of a miserable imposter. In either case a jury wholly ignorant of such matters is to judge which of two conflicting opinions is correct, and their decision on that point is like their decision on a question of fact arising under a conflict of evidence: it is final, and is not even a subject for review in an appellate court. An appellate court examines only the rulings of the judge in the court below on questions of law; it never examines the evidence, where there has been a conflict of evidence, with a view of deciding whether or not the jury found the right verdict; upon a pure question of fact, under a conflict of evidence the finding of the jury is final.

Now, the glaring defect of our system is in placing a question of medical science on the same footing that it places a question of fact.

Suppose that questions of legal science were to be decided in the same way; that is, lawyers put upon the witness stand to testify their opinions as to the law on given subjects, and the jury, having heard the conflicting opinions, should decide which is correct, what a farce would a lawsuit be!

Yet, in many cases involving the lives and reputations and fortunes of people, the law is so simple that it is known to everybody, but the questions of serious difficulty are those growing out of medical science.

The law is not, however, as wilfully inconsistent in this matter as it appears. Of course a jury is no more capable of determining which of two conflicting medical opinions is correct than they are of determining which of two conflicting legal opinions is correct, but the reason that the one question is submitted to the jury and the other is not is because there is no one to decide the medical question, as the judge does the legal question, and hence from necessity the jury must be left to guess at it. It would be an improvement on the present practice to decide such questions by the tossing up of a penny, since we would lose nothing in accuracy, and gain greatly in avoiding prejudice or partiality.

It is not proposed in this article to do more than call the attention of physicians to this subject; they must prescribe the remedy, as they best know how they could furnish the courts with the most reliable information upon those subjects wherein the law needs their counsel.

If there were a medical tribunal, which could be called on in proper cases to act in aid of the court, to hear the evidence as to facts, and hear arguments of medical men upon the questions of medical science growing out of such facts, and then to give the court written instructions on such points, after the manner of the court giving instructions to the jury on points of law, and if there were an appellate tribunal which could review and correct errors in such instructions, then we would have some security that when we give judgment according to such instructions, we would not be acting so completely in the dark.

Suppose a case be reduced at last to a single question of medical science. For instance: a man under indictment for murder in the first degree, the testimony being all circumstantial, and the last point in the evidence on which the case is to turn is a spot of blood on the defendant's clothes. It is claimed by the defendant that it is the blood of a deer, which he had slain in hunting, but on the theory of the prosecution, it is the blood of the murdered man. The single question, then, upon which the life of

the man and the honor and reputation of his family, and the correct determination of the most responsible duty a court can ever assume depend, is, whether the stain was made by human blood or the blood of a wild animal.

As the law is now administered, any number of medical men (representatives, each side choosing for itself), may be called on to make an analysis and testify as experts on the subject. Suppose that some should testify it is the blood of a wild animal, and some that it is the blood of a man, what safety is there in the verdict of the jury? And suppose, in order to test the accuracy of the different experts, they are cross-examined closely upon the analysis, and required to give scientific reason for their conclusions, who is to judge of the soundness of their reasons? It may be said that the hypothetical case thus put assumes that some of the witnesses are either ignorant or imposters. But, as has been above remarked, we cannot guard the learned professions so well but that such men will get into them, and once in they are often not to be distinguished from the worthy except by the profession itself.

The law will sometimes cause a man to be confined in an asylum and his property put into the hands of a committee for management, upon the belief that he is insane. Experience shows that this provision of the law is often abused, and the most cruel wrongs are sometimes perpetrated, wrongs compared to which death would be a blessing.

The law has ever been an earnest inquirer for wisdom from every source, neither scoffing at a subject because it did not understand it, nor yet yielding blind faith to the marvelous, but always guided by the best light it could obtain. It has been but little more than a hundred years since witchcraft was regarded as a reality, and those who were suspected of its practice were punished by law. Sir William Blackstone, whose lectures on the common law of England are as fresh and beautiful reading to-day as they were a hundred years ago, and which will be the delight of the student and philosopher as

long as the English language is read, says on that subject:

"To deny the possibility, nay, actual existence of witchcraft and sorcery is at once flatly to contradict the revealed word of God in various passages both of the Old and New Testament, and the thing itself is a truth to which every nation in the world hath in its time borne testimony, either by examples seemingly well attested or by prohibitory laws." [1]

Nevertheless, through the darkness of the superstition of that day we see the mind of the great lawyer struggling for light, and refusing to be satisfied with a dogma that was not in harmony with reason, as is shown in his comments following the above quotation.

Since then to what a great extent have those dark passages been enlightened by the aid of medical science, until now we see that what the law thought was witchcraft was but the figment of the brain of the body politic, induced by the oppressive intellectual darkness that covered it.

But we have only to compare a trial at law in those days with one now, to discover that our path is still obscure and our light is struggling dimly through the darkness, or else comes in fitful flashes like the lightning that reveals to the mountain traveler at night dangerous precipices over which he was just ready to plunge, it not only arrests his step, but admonishes him that he must not pursue so perilous a path in darkness.

We go back a hundred and fifty years, and see a poor wretch trembling in the prisoner's box before a jury, on the crushing charge of practicing witchcraft, which charge has for its foundation, perhaps, only that he was a student deeply absorbed in the study of a science that was to ameliorate the condition of his fellow man, and we shudder to think that he must be tried, and, perhaps, burnt at the stake because of the ignorance of those who administered the law.

Yet, let us go into one of our courts of the present day, and we see the poor, monomaniac, crouching with fear be-

1. IV. Black. Com., 60.

fore his accusers, having committed an act under an emotion which he could no more resist than can the sea the winds which convert its peaceful waters into destructive billows.

Who is it that is to touch the delicate chords of that wonderful instrument, the prisoner's mind, and say if they are in tune?

Alas! for our boasted civilization! our modern prisoner is little better off than the ancient one, for it is, at last, an ignorant jury who must make the final decision.

The knowledge required to safely guide such an inquiry belongs peculiarly to the medical profession, and when we think of the importance of the subject, the multitude of the interests involved, the delicate points on which those vital interests turn, we can but conclude that it is mere mockery to leave the decision in such cases to any other than a tribunal learned in that peculiar science.

ORIGINAL LECTURES.

CLINICAL LECTURES.

By M. Charcot.

Paris, January, 1879.

Mr. Editor: I beg to forward, for publication in the Courier, an account of the experiments made by M. Charcot, at the Hospice de la Salpêtrière. The clinics of M. Charcot were held on Sunday, at 9:30 A. M., and usually lasted two hours. In order to gain admittance every one had to be provided with a ticket, as none but medical men or medical students were admitted. To get a seat, or even standing room, large numbers were always on hand an hour or more before the time. I propose, in order to save space and avoid superfluous description, to give a mere synopsis of what I heard and witnessed. [1]

1. [Received through Prof. J. T. Hodgen. M. D.—Ed.]

Experiments of M. Charcot, in Producing or Provoking the Somnambulic and Cataleptic Condition or State by Various Agents, to the Influence of which Certain Hysterical Patients are Susceptible.

The patient was placed upon the stage, or, rather platform. The girl (young woman of 21 or 22 years) was directed to fix her eyes or look at a bright light (the Bourdouse lamp, Drummond burner or electric light). A very short time—a few seconds—sufficed to produce the cataleptic condition. The patient seemed as if fascinated; the eye widely open, staring directly at the light; the conjunctiva injected, humid, the eye had a startling appearance, moist looking, as if bathed in fluid, a sort of look of astonishment, marvel, wonder, surprise. Anæsthesia is complete, and, if the patient has been laboring under partial anæsthesia, she becomes entirely anæsthetic. There is no special contractility of any part, the limbs are flexible, natural, normal, or nearly so (occasionally there may be slight stiffness), but this property is acquired simply by retaining the attitude the patient takes when first brought under the influence of the light.

She seems entirely unconscious of everything that passes around and about her. No sign of intelligence is manifest. The patient takes any position the operator places her in. A peculiar and very interesting feature is the gesticulatory influence upon the face, physiognomy: for instance, place the hands towards the lips, as if in the act of throwing a kiss; the expression, the muscles of the face relax, and a smile peculiar to the act playfully encircles the mouth, in harmony with the position taken and the act. Again, change the position, and place the arms and hands, palms open, as in a begging position, immediately the face assumes an expression of soliciting alms, the smile, the pleasure manifested by the former attitude is gone, and replaced by a piteous, solicitous, begging expression, harmonizing with the position; thus the tragic position produces the characteristic form and expression of face and feature. These various phases have been termed *suggestive phenomena*. These conditions will last so long as the operator may feel disposed to continue the impression of light upon the retina.

If the light, however, suddenly disappears, is intercepted by a screen or the eyelids are lowered, a new state is produced, differing entirely from that of catalepsy, which is that of som-

nambulism. It is, no doubt, a nervous condition, nervous sleep, magnetic sleep, etc. Charcot designates this state by the name of Lethargy.

This hysterical lethargy supervenes briskly after the extinction or suppression of light; if the patient was standing, she falls backwards, the head thrown back, neck arched prominently. The eyes are closed, and a whistling inspiration is heard, accompanied by noisy movements of deglutition. While the patient is in this somnolent or lethargic condition, Charcot produces a remarkable phenomenon, which he designates Muscular Hyper-excitability: by the slightest friction on the surface, in the tract of a nerve, no matter how slight, muscular contraction is produced, and, if the contraction thus produced be prolonged, it may be transformed into a permanent one. Pressure of the facial nerve produces corresponding muscular contraction of the face; muscles may be isolated—take the stero-mastoid, the merest trace with the fingers upon the muscle turns the head in accordance with the action of that muscle; that is, the head turns away from the muscle that is being excited, and, if the other side is excited, the reverse takes place. Each muscle of the face touched singly, an isolated action is produced; in short, all the muscles are thus susceptible to contraction corresponding to the length of time and intensity of excitation; one may obtain at will contraction or rigidity.

In addition to the muscular condition above stated, another characteristic feature is manifest in this hystero-lethargic state, that is, a constant motion of the upper eyelid, convulsions of the globe of the eye in various directions, and persistent anæsthesia, total and absolute. This is the phenomenon—termed *carus hystérique*, or the first phase of provoked somnation.

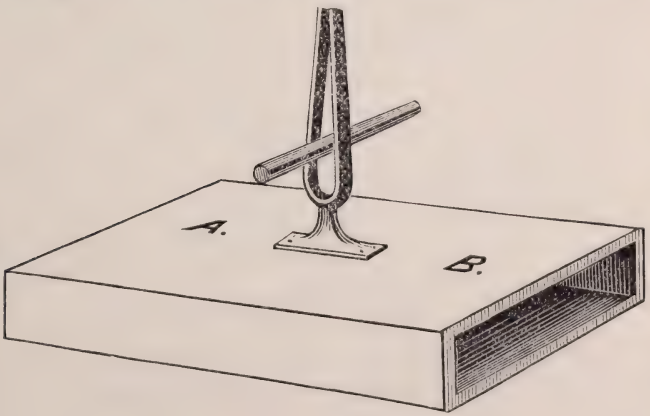
The patient thus far inert, may, under certain exciting influences, be brought to enter into another phase, which is, properly speaking, somnambulism. If the patient be loudly spoken to, she will arise, direct herself towards the person speaking; she will stand, sew, write, etc. The eyes are, however, closed, or partly closed. These performances are executed with precision, much as if she were awake. The muscular sense seems to replace the sense of sight (M. Azam). She answers all questions with greater conciseness than she could in her normal condition. The intellect appears to be exalted. The muscular phenomenon exists during all this time to the same extent. (Muscular hyper-excitability and trembling of the lid, etc.) The

patient is restored to consciousness by merely breathing or blowing on the face, or pressing on an ovary. At the moment of restoration the patient is taken with a slight pharyngeal spasm, which produces a little froth between the lips; which is evidence that there exists a link between these different states and a convulsive attack. The patient has no recollection whatever of what has transpired.

As to the nature and intimate mechanism of these phenomena, M. Charcot declares that he is unable to explain them in any manner whatsoever. These experiments may be varied in the same patient; both phases may be produced in the same patient; that is, one half of the patient may be cataleptic, and the other somnambulic, as will be seen by the next experiment.

Charcot stated that some English authorities seem to think that the imagination plays a part of considerable importance, or influence, in bringing about these conditions, etc. No one will, however, claim that a rooster has much imagination, yet the cataleptic condition was produced on the rooster by simply placing the beak of the fowl on a bright line of light, so as to fix the eyes of the animal on the line, and in a short time catalepsy ensued.

Other methods may be used to produce these states:
Charcot caused a box to be brought upon the stage, with an immense tuning-fork fixed in its center. The box is closed, except at one extremity; the fork is made of bell metal, and vibrates 64 times per second. Two patients were placed upon



the box, A and B, their faces directed toward the audience. The fork was set into vibration by violently separating its branches. At the expiration of a few seconds both patients were cataleptic, eyes open, absence of consciousness. They were placed in various attitudes, etc. He suddenly stopped the vibrations with his hand, the patients fell back, and all the phases of somnambulism were manifest. In order to bring the patient out of the cataleptic condition, the fork must suddenly be stopped while vibrating. If the eye of the patient be opened, and the electric light strike the retina, catalepsy is produced. Thus, he opened one eye, and the patient was somnambulic and cataleptic at one and the same time; each half of the body responded to the respective states, manifesting all the phases, both of catalepsy and somnambulism. Some patients are exceedingly susceptible; looking at them fixedly, or in any way inviting their attention—causes them to fall immediately into *carus hysterique*—and when once a patient is in a somnolent state, let a bright light fall upon the retina, and catalepsy is produced, which may be repeated at will.

Hystero-Epilipsy, and the Means of Provoking and Arresting the Attack at any Stage.

M. Charcot divides these hystero-epileptic attacks into four periods, and these periods are subdivided into phases. Some patients present all the periods and all the phases; others present only some of the periods, or suppress some of the phases; in others again, who have distinct crises, the hysteria may be completely separated from epilepsy. Charcot believes that this malady follows, and is governed by a law, strict, always the same in principle, and can be grouped in a manner, etc. There may be an epilepsy with a phase of ataxy, or a vertigo; hysteria may be predominant.

How are they produced? The patient is troubled with ovarian pain, sometimes one side, sometimes the other, or both sides may be the seat of pain. The pain does not remain stationary, but moves. How? Moves from organ to organ, ascending in an upward direction, gradually; sensations at the stomach, pain, etc.; the heart, lungs, larnyx, pharynx, at length the brain is reached, the aura cephalica, the aura of epilepsy. In hysterical patients, epilepsy may be provoked. (As in the case of the patients he intended to exhibit, who consented to be brought to the clinic.) These attacks can be stopped, better

arrested at any stage by producing pressure upon the ovary. The patients will frequently direct the operator to the spot where to apply pressure, either with the hand or the instrument. Some patients have the instrument applied and feel greatly relieved, especially when an attack is apprehended, etc.

Charcot exhibited diagrams presenting the periods and phases, which I attempt to reproduce, not very artistically, but perhaps sufficient to show the method adopted in order to aid in recognizing them.

Fig. 2. First Period. Phase I. Tonic.

The first period Charcot terms the *epileptoid*. The movements and attitudes of the patient commence by tonic contractions; the arms are drawn up, the wrists bent, and the hands, rather fists, drawn outward; the fingers are tightly contracted upon the thumb, that is, the thumb is inclosed in the palm of the hand, a peculiarity which is always present (the entire position of the hand), the dorsal surfaces of the hand (wrists) approach each other, the arms and limbs assume various positions. The second

Fig. 3. First Period. Phase II. Tonic.

phase is still of a tonic character, but the contractions relax, and the third phase is entered into by clonic contractions. The

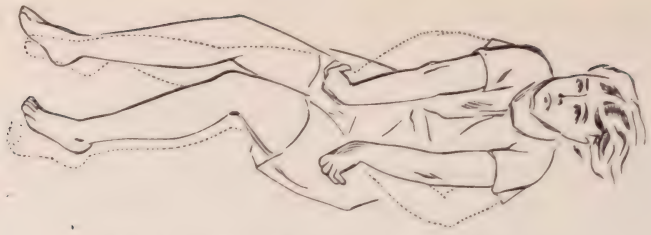


Fig. 4. First Period. Phase III. Clonic.

arms are very active, performing the movements of circumduction, termed by Charcot *mouvement de moulinet* — winding movement. The movement is rapid, agitated, but soon succeeded by a phase of perfect calmness, as it were. In the fourth

Fig. 5. First Period. Phase IV. Resolution.

phase, that of resolution, the body becomes rigid, straight, assuming an horizontal position. The patient seems as if preparing for an action of another character. The *second period* is about to be entered upon.

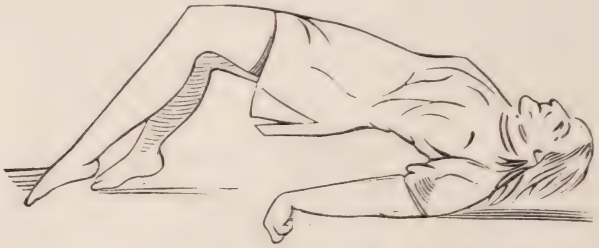


Fig. 6. Second Period. Phase I. Contortion.

In the first phase, that of contortion, the body is bent backward, forming an arc of a circle, supported only by the head and toes (opisthotinos); this arch does not last long, and a movement follows which is really grand; the limbs are drawn

Fig. 7. Second Period. Phase II. Grand Movement.

up, the upper part of the body begins to move forward and backward with great rapidity, the head coming in contact with the mattress each time the body is thrown back, and that with some force; the eyes have a wild, prominent look; the face is flushed, excited; the hair disheveled, thrown about the shoulders, head and face. This phase looks weird, and the patient exhibits an attitude demoniacal. Charcot terms this phase *le grand mouvement.*

A most remarkable change takes place in the period that follows, the third.

Fig. 8. Third Period. Phase I. *Plastique.*

Periode de pose plastique ou passionelle. The patient assumes a most passionate attitude; her arms semi-flexed, thrown up; palms open, as if full of surprise, wonder, charm, delight, bliss. The physiognomy exhibits an expression that would perhaps completely fill the picture of ecstasy, rapture, wonderfully

pleasing, with eyes bright, open, upturned, (theologically speaking) heavenly; the lips somewhat apart, and a smile intensely pleasing playing round them; face flushed and turned upwards.

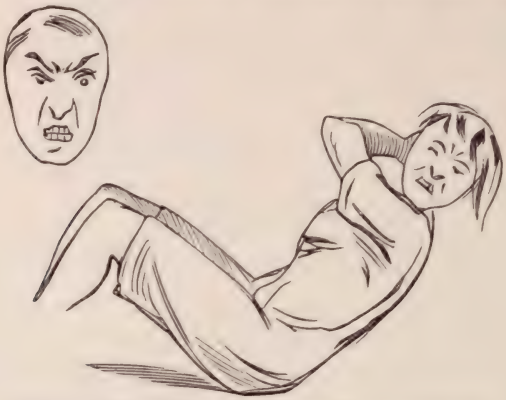


Fig. 9. Third Period. Phase II. *Passionelle.*

The next phase soon follows, the change is entirely the reverse of the preceding; disgust, disappointment, fear, remorse, anger, revenge, sad in the extreme. The attitudes and expressions are in harmony, of a melo-dramatic character, consisting of a gay and a sad phase. There is no logic in these movements; the other phases are claimed to be logical.

Fig. 10. Fourth Period. Delirium; Hallucination; Prophesy.

In the last period—that of delirium and hallucination—the patient weeps, shrieks occasionally, she fancies she sees all

sorts of animals, rats, cats, snakes, birds, etc. These are either black or red. When this last period has terminated, the patient commences at the beginning, and proceeds through all the periods and phases, until arrested.

Patients were brought into the hall upon litters, the instrument (Figure 11) being fastened on. This was removed,

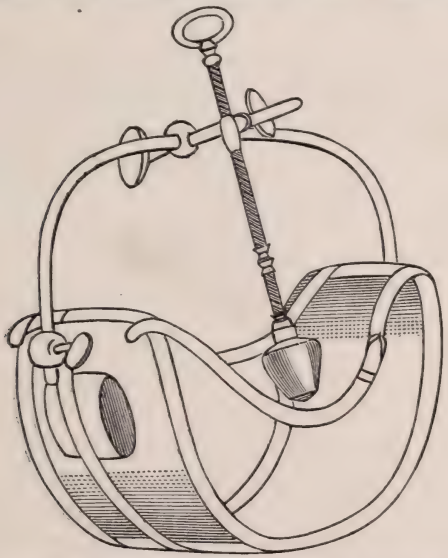


Fig. 11. Tourniquet for making pressure upon the ovary.

the electric light turned on, and the patient immediately commenced the movements consisting as above, very briefly stated. The scene is painful to witness, though some humorous attitudes and expressions are occasionally produced in the third period especially; one patient kept time with the finger, put the tip of her tongue out, etc. There is usually a history connected with these cases, and this third period reflects portions of it, as the arms are crossed upon the bosom, hugging closely the breast. After joy has been manifested, remorse, anger, fear, etc., follows.

Several patients were exhibited, and the attacks were stopped by mere pressure on the ovary, either by hand or instrument. Two patients assumed the form of a cross during the attack, which is no wonder, because crosses are plentiful in the hospital. I must not omit to mention that in the period of hallucination, prediction and prophecies are not unusual.[1]

[1] [Readers further interested in the doings and sayings of Charcot, and what is thought of him, will find an interesting article in this number of the COURIER, under the general heading of Selections.—ED.]

UNRECOGNIZED SYPHILIS.

A CLINICAL LECTURE DELIVERED AT ST JOHN'S HOSPITAL, JAN. 4, 1879, BY T. F. PREWITT, M. D., PROFESSOR OF CLINICAL SURGERY, MISSOURI MEDICAL COLLEGE.

Gentlemen: I propose to call your attention to-day to what our French brethren call syphilis ignoré, or unrecognized syphilis. The importance of the subject to both practitioner and patient, and the comparative frequency of such cases, induces me to devote the hour to the discussion of them, especially as we have before us to-day two cases in point.

The *first case* is the boy, Dan. Vanhorn, aged twelve years, who presented himself at the clinic one month ago, with what was supposed to be lupus of the nose. The greater part of the cartilaginous portion of the nose, including the alæ and septum, had been destroyed, while the attendant ulceration, which extended over the lip nearly to the line of junction of integument and mucous membrane, was covered with thick dark crusts; the lip itself was greatly swollen and thickened, and the gums were swollen and spongy. A tubercle was seated upon the central ridge of the nose, over the nasal bones, covered with a thickish brown crust, while another, somewhat smaller, was situated upon the left cheek, one inch below the inner angle of eye. The boy was somewhat pale, with a rather waxy hue. There was found a peculiar enlargement of the spleen, which projected downwards in a pointed manner, forming something of a cone, the apex traversing the median line about three inches below the umbilicus, while the right border above did not reach to this line. On inquiry of the mother we learned that the trouble about the nose had commenced in March last, as a swelling across the cartilaginous portion near the junction with the bony structures; that it was red, smooth, and glistening; that there was no distinct tubercle. Subsequently ulceration commenced about the junction of the ala with the lip, and the destruction of the soft parts, which we observed when he presented himself, had taken place in the interval. We further learned from her that he had generally been a very healthy boy, with the exception of chills, at various

times in his life, but that he had had no sores or eruptions upon his body, and was a healthy infant. From the physician who has attended the boy from infancy, at intervals, I learn that there has never been any history of constitutional trouble. In spite of this absence of all syphilitic history, I expressed to you my suspicion that it was a case of hereditary syphilis—a so-called syphilitic lupus, although I expressed objections to the use of this term as a misnomer—that there was no such thing as lupus, the outgrowth of syphilis; that the neoplasm in lupus was totally different from that in syphilis, although it was undoubtedly true that a lupus, *where it existed*, might be modified by a co-existent syphilitic diathesis, just as it might be modified by a co-existent scrofulous diathesis. You will remember that I subsequently told you that, having had an opportunity to question the mother more closely, I learned that the father, dead many years, was a river man, often absent from home, and also the very important fact that, when the boy was fifteen months old, he had an oval-shaped patch or sore about the anus, which was slightly elevated, and presented little raised points over it; that this had remained for some considerable time, but eventually healed by local treatment alone.

This I believe to have been a mucous patch. Upon examining the boy's throat, too, we found that ulceration of the soft palate had destroyed the uvula, and affected the half arches more or less. Now lupus is a tubercular affection of the skin, not a blood disease; it spreads by a process of tissue infection, not by blood contamination, and consequently its inroads are upon its borders, and not by development at other and distant points.

I no longer felt a doubt about the syphilitic origin of the trouble, and I stated to you that, if correct in my diagnosis, the treatment upon which I proposed to place the patient would confirm it. He was accordingly placed upon five-grain doses of Iod. Potass., with instructions to increase it to ten, unless iodism was developed. Iron and Cinchonidiæ Sulp. were also prescribed, but no local applications were resorted to. The rapid improvement which has taken place has fully confirmed the diagnosis. The ulceration, as you see, has completely healed, while the cicatrization, which has gone on, has almost closed the anterior nares. His general condition has greatly improved, his appetite has become ravenous, he has gained

in flesh and become ruddy. No such effects as these would have followed the treatment of lupus, by constitutional means alone.

The enlarged spleen, too, has been greatly reduced. This enlargement, I told you, might be due to the malarial attacks he had had, though it was not impossible that it was also partly due to the syphilitic condition.

The *second case* is that of John McGuire, aged 56, married, who, while admitting of opportunities of infection, declares positively that he never had a venereal sore, cutaneous eruption, or a sore throat. Nor has his wife ever had any manifestations that could be regarded as syphilitic. He states, however, that he has suffered for the past seven years with neuralgia of the head; that he has had rheumatism of the limbs, extending along the shaft of the bones, and worse at night; and when he first presented himself at the clinic there was a sinus upon the upper part of the left side of the forehead, near the margin of the hair, leading down to carious bone, which had been running for a long time. There was a scar an inch to the right of this, where ulceration and discharge had existed, both the result of the neuralgia he had had. Just below the right frontal eminence was a prominence which was tender on pressure. Ulcers existed upon the leg, the tibiæ were thickened, and he suffered with nocturnal pains in them, while both humeri presented irregularities which were tender on pressure.

Here again, in spite of the declaration of the patient and the absence of all history of primary or secondary lesions, I declared to you my conviction that we had before us a case of tertiary syphilis. The lesions presented were characteristic of nothing but syphilis. Neuralgia is not a suppurative affection; rheumatism does not affect the shaft of bones, and periostitis occurring in a man, the age of this patient, in different parts of the body, could only be due to syphilis. Here again the treatment has confirmed the diagnosis. Under the use of Pot. Iod., gr. xv. to gr. xx., three times a day, the sinus upon the forehead healed within a week, while the osteocopic pains have all disappeared as well.

These are but illustrations of the obscure cases that frequently present themselves to the practitioner, and require no little familiarity with the Protean manifestations of this malady, to lead to their recognition. I am discussing now, remember

those cases where the patients themselves are ignorant of ever having had syphilis, and stoutly deny it, however closely questioned.

That a malady so aggressive in its course, with such multiple manifestations, should be so frequently and for so long unrecognized, seems at first sight almost incomprehensible. But that it is so, by both patients and practitioners, every physician of much experience in hospital practice especially, can affirm.

Mon. Fournier has well pointed out some of the causes that lead to this frequent non-recognition of the disease. The prevalent opinion, that syphilis is always a disease of venereal origin, and that the primary sore must appear upon the genitals, misleads both patient and practitioner often, as to the true character of the later manifestations, which, in the absence of this supposed essential link, are attributed to other causes. Suspicion is disarmed where impure sexual intercourse is out of the question, and the genital organs have presented no tell-tale lesions.

Yet, as a matter of fact, we know that not a few of the cases we meet with are of non-venereal origin, while the primary sore may occur upon any part of the body with which the syphilitic virus may be brought in contact. Children with hereditary syphilis may communicate it to nurses; lovers with secondary sores upon their lips to their sweethearts, as occurred in the practice of a professional friend of mine in this city, where a lovely young lady was contaminated in this way. A little girl, the patient of another physician here, had a chancre upon her cheek, the result of a kiss by a young man with sores about his mouth. A prominent physician of this city had a syphilitic sore upon his finger for weeks, contracted in his obstetric practice, the nature of which was only recognized when secondary manifestations revealed its true character. The use of the same pipe, cup, or spoon, or the careless use of instruments in the hands of the surgeon, have all been recognized as the means of contagion in certain cases.

Again, the primary sore may be so insignificant as to be completely overlooked by the patient, or it may be concealed in the urethra, or under the folds of a long prepuce. Or it may be in the vagina, or upon the cervix uteri in a woman. The secondary symptoms may be so trifling as to escape notice, as in the case of the man McGuire, before you to-day, who unquestion-

ably had earlier symptoms, too slight, perhaps, to enforce attention. In his case, the prepuce is long, and the preputial orifice so small that it is almost impossible to uncover the glans, and a superficial chancre might well have been concealed within it, and its presence totally unsuspected by him.

Syphilis involving the nervous system is especially liable to be overlooked, from the fact that where this is the case the other tissues are most likely to be exempt. Or perhaps, it would be more correct to say, that where the earlier symptoms have been very mild, the nervous system is most likely to suffer. This has been especially insisted upon by Mr. Broadbent, and is confirmed by Lanceveaux, Gross, Moxon, and others. Thus, lesions of the nervous system, due to syphilis, have often but a most obscure history to indicate their origin, while, on the other hand, the whole subject of these lesions, and the knowledge we have of them, has been the outgrowth of modern research.

Women are especially liable to be the subjects of syphilis ignoré, for various reasons. Their ignorance of the nature, and often of the very existence of such a disease, and the interested efforts of the husband or lover, through whom they become infected, to keep them in ignorance, explains the fact that we so often meet with cases in women, of the later and more obscure manifestations, who have never suspected the existence of the disease in themselves, and from whom we can obtain no satisfactory history. A few years since I was called to see a Mrs. F——, who had been suffering for weeks with a most intense hemicrania, which was worse at night. She was unable to sleep except by snatches; she was greatly emaciated, and was a most pitiable object. I found deep excavated ulcers upon the calves of her legs, the very type of syphilitic ulcers. Upon inquiry, I learned that two or three years before she had suffered with sore throat; that she had also had some eruptions upon the skin, which she attributed to vaccination, performed by a recently deceased member of the medical profession in this city. Now, let me say, that while I am not prepared to deny that syphilis *may* follow vaccination, it is an excessively rare accident, else the whole world would have been syphilized long ago. This woman had been under the care of two or three physicians prior to my being called, who had either not recognized the disease, or had failed to treat it efficiently, while she herself, seemed in total ignorance of the cause of her suffering.

Under the influence of full doses of Iod. Potass., the "opiate of syphilis" as it has been aptly called, the hemicrania disappeared in a day or two, the ulcers soon healed, and I saw the woman upon the streets a short time back, stout and fat.

Again, hereditary syphilis may not make its appearance for years after birth, or at least any symptoms in childhood may be so slight as to fail of recognition, as was the case in the boy before you to-day.

The lesson, then, I would impress upon you, is not to allow yourselves to be mislead by the absence of history, or even by the denials of the patient in these obscure cases, but to base your diagnosis, as insisted upon by Mon. Fournier, upon the character of the lesions themselves. The crucial test in these cases is the treatment, and you will often find your diagnosis brilliantly confirmed in spite of the denials and even indignant remonstrances of your patients.

I have long since learned not to accept, implicitly, the statements of patients in reference to venereal diseases, not only for the reason that they, themselves, may be in ignorance of their existence, but also because my observations have taught me that there is no class of affections about which people of ordinary veracity, will more frequently deliberately attempt to deceive you.

CASES FROM PRACTICE.

EMPHYSEMA OF THE CELLULAR TISSUE COMPLICATING HOOPING-COUGH.

By H. V. Ferrell, M. D., Carterville, Ills.

Emphysema of the cellular tissue, as a complication of hooping cough, must be a rare affection, as some of the standard text books on diseases of children do not even mention it, and during an active practice of ten years, I have seen but one case, and have not heard of any others occurring in the practice of my medical friends.

I was called to see the case alluded to, in consultation, during the month of October, 1878. The patient, a male, aged eighteen months, had had hooping-cough four weeks. A few days prior to my visit, a large oval-shaped tumor appeared over the upper part of the sternum, and another of the same character in the bend of the left elbow. Finding them compressible, and giving a distinct crepitation, together with pneumothorax of the left side, the diagnosis, emphysema of the cellular tissue, caused by rupture of pulmonary air-cells during the violent paroxysms of coughing, was made.

To prevent any further rupture, and at the same time allow those already made to heal, it was eminently desirable to institute a course of treatment that would to the greatest possible extent control the paroxysms of coughing, which were unusually frequent and violent. It was thought to try as an application to the spine, the following, so highly recommended in the Philadelphia *Medical and Surgical Reporter*, July 21st, 1877:

℞ Olei Succini Rectificati,
Tincturæ Opii,
Aquæ Ammoniæ,
Olei Olivæ, ā ā ℥i. (32 Gms.)

M. Sig. Apply externally.

Not being able to get the prescription filled, and believing it to possess no virtue aside from that as a counter-irritant, the following:

			Gms.
℞	Olei Tiglii,	℥i.	4
	Ætheris Sulph. Fort.,	℥ii.	8
	Tincturæ Iodinii,	℥v.	20
	Potassii Iodidi,	℈i.	1 | 3

M. S. Externally.

already well known to the profession as a valuable counter-irritant in pleurisy, was used in its stead. At the same time, quinine, citrate of iron and ammon., and iodide of potassium were used internally. The improvement was so sudden, so marked, and so uninterrupted as to leave no doubt about its being dependentupon the treatment.

The rarity of the complication, and the marked influence of the treatment upon the paroxysms of coughing constitute my apology for bringing the case before the profession.

REPORTS ON PROGRESS OF MEDICINE.

DISEASES OF THE THROAT.

By W. C. Glasgow, M. D., St. Louis.

Diphtheria, Contaminated Milk as a cause of.

In the report[1] of the proceedings of the Pathological Society, of London, we find the discussion of a paper communicated by Mr. W. H. Power, suggesting the possible and probable relations between milk and certain epidemics of diphtheria; his observations being based upon investigations into the causes of a recent outbreak of diphtheria in North London.

The well known and recognized connection between the occurrence of typhoid fever and a contaminated milk supply is now fully acknowledged, but the truth of the proposition that diphtheria may be contracted through the same source, has up to the present time never been clearly proven.

In this special instance, there seems to have been another factor in the possible cause of the disease. An obstruction in the outlets of the sewer draining the district, combined with the occurrence of a heavy rainfall, caused a backing-up of the sewerage, and a penning-up of the foul air, which found its way through faulty traps into the dwellings.

The great difficulty of accepting this explanation, Mr. Power thinks to be in the fact that the outbreak of the disease occurred five weeks later than the obstruction of the drains, such length of time not being compatible with the generally received idea of the incubation period of diphtheria. The fact, however, is noted, that although five weeks passed between the occurrence of the disease and the obstruction of the drains, two weeks only had elapsed since the inundation caused by the heavy rain-fall. Mr. Power, allowing a certain influence to have been exerted by the defective sewerage, still holds it to have been subordinate in character.

[1] *London Times and Gazette*, Jan. 29, 1879.

The evidence which led Mr. Power to the belief of infected milk as a source of the disease is, that "he found the immense preponderance of cases occurred in houses supplied by milk from two separate wholesale milk businesses belonging to one proprietor, and that even in the special sewerage area referred to, there was a very marked inequality of prevalence of throat illness in houses supplied with milk from one of the businesses mentioned as compared with those supplied by other milkmen; and that a striking similarity was observed in the chronology of some earlier local outbreaks of the disease in centers widely apart, supplied by milk from the other place of business."

All evidence of the pollution of the milk after leaving the cow, even of the admixture of water, seems wanting, and he was inclined to the belief that it was the result of a personal condition of the cow or of the milk, as has been claimed in the recorded instances of milk-scarlatina. He says the disease must be one affecting only slightly the general health of the animal, at the same time materially influencing the milk.

Dr. Power finds in garget, a disease fulfilling these conditions. He describes it "as affecting the udders of the animals, their general condition being but slightly influenced. Usually one or two (seldom more) quarters of the udder are invaded, the milk drawn from the affected teats being at first bloodstained, and afterwards mixed with slimy or ropy material. The diseased quarters become hard, and swell, and their yield of milk is diminished or suppressed, while that from the sound qnarters remains almost normal in quantity and quality." Unfortunately, Mr, Power could find no positive evidence of the existence of garget in the cows supplying the infected district, though, from the trivial character of the disease, he believes it could have existed unnoticed, and he advises the further study of garget in its possible relation to diphtheria.

Mr. Smee, following Dr. Power, stated the result of his investigations into the nature and symptoms of the disease termed garget. He found the symptoms so trivial as to be often overlooked. Occurring in his own herd, it was only detected through "the presence of sticky or slimy matter upon the strainer," and he found that the milk of one quarter was sufficient to spoil the milk of several cows for setting, but if the milk was for immediate use the dairymen might never discover the disease.

He classes garget under three forms. One from an injury to the udder, or from rupture of a vein, through leaving the cow too long unmilked, another from cold, and a third and rather rare form which, he thinks, may possibly be of a specific nature. In the first two forms of the disease, he finds no change in the health of the cow, or of the calves. In the third form, he finds "the health of the cow to be involved; in one case, loss of power on the side of the affected quarter; in another, swelling of the glands, with symptoms of dyspepsia, and that it produces scouring and wasting in the calves fed on it. He mentions, as a coincidence, the appearance of diphtheria in the Princess Mary's Home, at Woking, whilst garget existed on the dairy farm supplying the Home with milk.

The obscurity in the ætiology of diphtheria is so great, that every possible source of its origin should be thoroughly investigated. In the larger towns and cities, its production by sewer gas from faulty water-traps, and from the putrid emanations of filth, has been fully demonstrated, but in the smaller villages, and the isolated farm-houses, these causes are often wanting. Eliminating those cases traced to the use of water, contaminated by cess-pools, or the drainage of out-houses, we still find the disease originating in a most unaccountable manner. Should these views of Dr. Powers be substantiated in regard to the contamination of milk of cows suffering from a trivial ailment, it may be garget or some other allied disorder, we may possibly be able to account for otherwise obscure cases.

Such investigations can be best made in the country, where the milk of a single or a few animals supplies the family, whilst in the cities the mixing of large quantities, and the adulterations to which it is often subjected renders them more difficult and uncertain. It lies, then, with the physicians in the country, meeting with cases of diphtheria of obscure origin, to investigate not only the circumstances of the water supply and the drains, but also to examine into the possibility of it arising from the use of contaminated milk.

Diphtheria, Treatment of.

Dr. Ferrand,[1] in a late number of the *Union Medicale*, has summarized the experience of French physicians in the treatment of diphtheria, based on the practice of the past two years, dur-

1. *London Lancet* (Am. Rep.) October, 1878.

ing the existence of a severe epidemic. No specific remedy is advocated, and the antiseptic applications seem to have met with the most favor. Tannin, which was advocated by Trousseau, is employed by Dr. Crèquy in the form of an inhalation, claiming that the vapor of water carries with it a considerable quantity of tannin. Salicylate of soda has been given by M. Cadet de Gassicourt, but without any satisfactory results, and salicylic acid was equally useless in the hands of Dr. Bergeron. Dr. Soulez praises carbolized camphor (twenty-five *grammes* of powdered camphor dissolved in one *gramme* of alcohol and nine *grammes* of carbolic acid). It is employed pure or mixed with oil of almonds. Its application is said to be followed by a separation and disappearance of the false membrane, leaving a simple ulceration, which quickly heals.

The old remedy, chlorate of potash, is highly recommended by Drs. Isambert and Seeligmuller. The latter gives it in solution every hour, and claims that it causes the removal of the fetor, the gradual disappearance of the false membranes, the reparation of ulcerations, and rapid improvement in the general state. He ascribes this last effect to a fancied power of carrying oxygen to the blood, which contains but little in consequence of the action on it of the diphtheritic bacteria.

Ferrand corroborates its utility, but doubts its influence on the general state of the patient, ascribing its action rather to its excretion by the salivary and pharyngeal glands. Bucquay and Blache also recommend it.

Cadet de Gassicourt made a comparative trial of chlorate of potash, cubebs and salicylate of soda at the Hôpital Ste. Eugénie, and does not hesitate to accord the first place to the chlorate. Trideau advocates the use of cubebs and copaiba, masking the taste with sugar and Malaga wine.

Walcker recommends the tincture of encalyptus (ten *grammes* of alcoholic extract of encalyptus to thirty-eight *grammes* of syrup), given after an emetic. All these agents acting as modifiers of the affected surface. Actual caustics have fallen into disrepute, although nitrate of silver is still recommended by Guillon as an application, not only to, but around the false membranes. Ferrand, however, objects to this method on the theoretical ground that the raw surfaces become the seat of fresh membrane. He agrees with Dr. Rose Cormack in advocating the simplest local applications. Glycerine of borax or a

weak solution of hydrochloric acid, lime-water or sulphate of soda; and he recommends the alternation of these inoffensive applications.

We doubt whether this treatment of diphtheria, as summarized by Dr. Ferrand, would meet with entire approval on this side of the Atlantic, for few American practitioners would be satisfied with the application of inoffensive remedies in this dreaded disease. The chlorate of potash is, we believe, a constituent of nine-tenths of the mixtures prescribed, but few would be hardy enough to pin their faith on this alone. The "bacteria" doctrine, the product of German closet philosophy, has been widely extended, but we doubt whether many can be found so fascinated as to devote the precious time to their destruction, or to supplying the blood with the oxygen they may have appropriated, without at the same time using their utmost skill for the building up of the failing powers of the system. We believe that the bacteria doctrine has done incalculable harm in drawing the attention from the constitutional condit on to the local lesion; in making the local lesion the primary infecting source, and in subordinating the constitutional condition.

In regard to local applications, the greatest diversity of opinion exists—some bacterian philosophers making exclusive use of the antiseptic and anti-ferment remedies; others use the salts of iron and copper, turpentine and carbolic acid in caustic strength, and all are firmly convinced of the great value of these preparations; this opinion being founded on the fact that most cases recover under such treatment. How is it possible that treatment directed from most diverse theories with most opposite remedies should produce the same good results? We believe that the secret lies in the fact that sporadic diphtheria is a rare disease, at least in this portion of the country, that it varies greatly in intensity in different epidemics, and that diseases simulating it, but of comparatively trivial character, are very common.

Ulcerating anginas, with follicular and purulent secretion, herpetic eruptions and the l'angina pultaceous of the French are met with in the practice of every prominent physician by the dozens; they have been politely named "homœopathic diphtheria," and we believe that these are the class of cases which yield to such diverse and contradictory remedies. During the

prevalence of epidemics of diphtheria these kindred diseases especially prevail, just as we see the anginas during scarlet fever epidemics, but they should be carefully eliminated from the statistics as cured cases of diphtheria.

As examples of the American practice, we think the views of Dr. Billington (*Med. Rec.*, Jan. 12, '78), and of Dr. J. Lewis Smith (*Med. Rec.*, April 13, '78), are, with some exceptions, the prevailing ones. Dr. B. is a conservative bacterian, and a believer in the local origin, whilst Dr. Smith considers the disease as a constitutional disease, with throat symptoms as secondary.

Dr. Billington, however, believes in constitutional treatment, as evinced by the following formulæ, which he recommends:

(1) ℞

Tr. Fer. Chl., f. ʒi.—iss. 4 to 6 gms.
Glycerinæ,
Aquæ, ā ā f. ℥i. 31 gms.

(2) ℞

	Gms.	
Potass. Chl., ʒ ss–j.	2	
Glycerinæ, ℥ ss.	15	5
Aq. Calc., ℥ iiss.	77	5

I. Give a teaspoonful of No. 1 and of No. 2 every half hour, alternately, except at night, when the patient may be allowed to sleep for an hour or two at a time.

II. Spray the throat with a hand atomizer, except in very young children, every half hour with the following mixture:

	Gms.	
℞ Acidi Carbolici, ♏. xv.	1	
Aquæ Calcis, f. ℥ vi.	186	6

III. When there is nasal implication, the nose should be syringed with tepid salt water several times a day.

IV. Do not apply a swab or brush to the throat, a little of the iron solution may, however, be thrown against the affected surface with the syringe.

V. Do not give quinine or unpleasant medicines to children.

VI. Do not as a rule, with exceptions, give alcohol.

VII. Give plenty of cold milk, to which lime-water may be added at times, and in exhausted cases give meat juices. Dr. Billington claims, by this treatment, out of 124 cases to have saved 94.

Dr. J. Lewis Smith, in an excellent article in the October number of the *American Journal* (1877), enters fully into the details of the treatment of diphtheria. Dr. Smith, considering the disease to be *ab initio* constitional, lays the greatest stress on constitutional treatment, he recommends nutritious and easily digested food, and that the appetite should be carefully preserved. Beef tea, or the expressed juice of meat, milk, with farinaceous food, etc., should be administered every two or three hours, or to the full extent, without over-taxing digestion, and he warns that the patient should not be allowed to slumber too long without nutriment. He believes in the free use of alcoholic stimulants, and endorses Dr. Chapman's plan of giving alcohol, a teaspoonful of brandy every hour or every half hour to a child one or two years old.

[Dr. Chapman, believing that the free and early use of alcohol prevents nephritis, and reporting but one death in sixty cases so treated.]

Dr. Smith recommends quinine in medium doses, with the addition of the chloride of iron and the chlorate of potash, not believing in a specific action of the quinine, but using it simply as an anti-pyretic and a tonic.

In regard to local treatment, he advises that the applications should be of a mild and non-irritating character, he condemns the forcible removal of the pseudo-membrane, and recommends the use of the atomizer.

He gives the following mixtures for use with the atomizer:

R.		Gms.	R.		Gms.	
Acid. Salicyl.,	ʒss.	2	Acid. Carbol.,	♏xxxii.	2	
Glycerinæ,	℥ii.	62	Glycerinæ,	℥ii.	62	
Aq. Calcis,	℥viii.	249	Aq. Calc.,	℥vi.	186	6
M.			M.			

He also advises the following mixture to be applied to the pseudo-membrane by means of a soft brush:

R.		Gms.	
Acidi Carbolici,	♏viii.	5	
Liq. Ferri Subsulph.,	ʒii–iii.	7	8–11|7
Glycerinæ,	℥i.	31	
M.			

In the treatment of the pseudo-membranous laryngitis of diphtheria he uses the steam atomizer, using lime-water, and notes the relief of seven cases out of twenty-five by this means. Where the membrane has extended into the nostrils he uses

injections with a small syringe of the following mixture every third or fourth hour:

℞.		Gms.	
Acid. Carbolic.	gtt xxiv.	1	
Glycerinæ,	℥ii.	62	
Aquæ,	℥vi.	186	6

We believe that Dr. Smith's views will meet the most hearty approval of the largest majority of American practitioners.

Tracheotomy, however, has not been given a sufficient place, as a means of relief of diphtheria involving the larynx.

Inhalations of lime-water or vapor, and the use of the spray accomplish a good deal in removing secretions and portions of membranes, but the cause of laryngeal obstruction in true diphtheritic laryngitis is not so much the membrane as the œdema and the great infiltration of tissue. The phlegmonous character of the diphtheritic inflammation as seen in the pharynx, will at once suggest the hopelessness of reducing it, when it involves the larynx of a child, considering, as we must, the smaller space occupied by the rima glottidis.

In such cases an early tracheotomy, even at the risk of the wound becoming diphtheritically inflamed, offers the only hope.

Treatment of Laryngeal Phthisis.

Dr. J. Solis Cohen,[1] in a lecture delivered in the Jefferson Medical College Hospital, gives some excellent advice on the treatment of laryngeal phthisis. He advises the usual constitutional treatment as applied to pulmonary phthisis, including good food, fresh air, cod-liver oil, etc. He lays great stress on the local treatment of the larynx, not only for alleviating the symptoms, but even in the earlier stages in some cases for producing a cure. He advises, as the first and all important step, that the patient should give up entirely, any occupation which subjects him to the necessity of breathing an atmosphere laden with irritating particles, and cautions as to the prolonged use, and straining of the voice, even enjoining actual silence. As a local treatment, he recommends the use of a mixture composed of:

℞.			Gms.	
Acidi Carbolici concent.,		f ʒi.	4	
Tr. Iod. Comp.,		f ʒii.	8	
Aquæ, q. s. ad.		f ℥iii.	93	

M. S. f ʒi. (4 Gms.) three or four times daily, by spray or inhalation.

1. *N. Y. Medical Record*, 1878.

The advantages he claims for the spray are, that it cleanses the parts, and acts as a stimulant to the sluggish capillary circulation. The iodine acts as an absorbent, and the carbolic acid as an astringent and disinfectant.

In the treatment of ulcerations, he warns against the use of irritating applications. Soothing applications should be used, and a weak solution of aconite in glycerine, or a weak solution of morphine or belladonna are recommended. Chloride of zinc, in weak solution, (one part to fifty or one hundred), he believes to be an excellent remedy. In the latter stages, he recommends the use of the nitrate of silver (forty to sixty grains to the ounce), cautioning that it should not be applied to the interior of the larynx, and observing that the only benefit to be expected from its use will be the covering of the parts with a coating of coagulated albumen, this serving as a protection from the air and irritating food.

Where suffocation is threatened, he endorses tracheotomy as a means of prolonging life.

We heartily endorse the treatment of laryngeal phthisis, as given by Dr. Cohen, and can only regret that he did not go more into the details, for if the profession at large were more thoroughly conversant with the treatment of this form of disease, many weary months of pain and suffering would be spared. In the first stages, the symptoms requiring attention are cough, it may be a persistent hacking, or one occuring in paroxysms, and a feeling of rawness or irritation referred to the laryngeal or upper sternal regions.

The application of astringent remedies of which the salts of iron, or the chloride of zinc, combined with a few drops of carbolic acid and glycerine are among the best, will be found of great benefit. Although the use of the spray possesses all the advantages claimed by Dr. Cohen, and should be used frequently to keep the parts as free from secretion as possible, still we prefer the use of the brush or the sponge, being thus able to use stronger solutions to the limited patches of inflammation, without the disadvantages of applying them to the whole surface.

In the latter stages, pain, cough, difficulty of swallowing, and attacks of suffocation must each be met by appropriate treatment.

We do not think that Dr. Cohen has laid sufficient stress on the value of morphine in strong solutions, or in the form of

powders blown upon the parts by insufflation, as a means of relieving the pain, at least temporarily.

The cough may be alleviated by the same means, or by the use of the morphine and wild cherry linctus. Chlorodyne has been found equally useful.

The difficulty of swallowing, when not caused by the pain, is often due to œdema of the posterior surface of the larynx, or of the epiglottis.

The application of tannin, or the scarification of the parts will often relieve it; a blister applied over the cricoid region has often the happiest result.

In the treatment of the dyspnœa a discrimination must be made between that due to laryngeal obstruction and that of the cardiac weakness accompanying advanced phthisis. For the relief of the latter, nothing is better than digitalis, with or without stimulants. In the case of laryngeal obstruction, unless occasioned by œdema, tracheotomy is the only resource. The advisability of operating depends in a great measure on the condition of the lungs. In case the disease of the lungs is far advanced, and there is little promise of life, except for a short time, we doubt the advisability of the operation, but in cases where the destruction of pulmonary tissue is moderate, and the laryngeal obstruction causes distress, tracheotomy should be performed.

CHEMISTRY.

By Professor Chas. O. Curtman, M. D., St. Louis.

New Chemical Elements.

Since the time when, nineteen years ago, Kirchoff and Bunsen crowned the work of their inestimable method of spectral analysis by the discovery of two new metals, one element after another has been added to the list, and in the last two years their number has rapidly augmented. First in order came *Caesium*, in 1860, and shortly after it *Rubidium*, in 1861, two metals of the alkali class, so closely resembling potassium in their reactions that only the minute accuracy of the spectroscope could have led to their detection.

In 1861, *Thallium* was discovered by Crookes, the able editor of the *Chemical News*, and in 1863, the labors of Reich and Richter enriched our catalogue with the new metal, *Indium*.

All four of these give, when heated in the Bunsen flame, spectra of colored lines of so prominent a character that the names selected were in reference to their colors.

Caesium (grayish blue) shows two brilliant lines in the blue part of the spectrum, about half-way between G and H, besides numerous fainter lines.

Rubidium (ruddy) is characterized by two deep red lines, near the visible limit of the red, but has quite a number of other fainter lines.

Thallium (green twig) shows a single brilliant green line between D and E.

Indium has two lines, one deep blue, near G, the other indigo, near H, whence its name.

The "periodic law" of Newlands, developed by Mendeljeff, shows that a marked relation exists between the quantivalence of elements, and a regular progressive increase of their combining weights. A table constructed to illustrate this law leaves certain blank spaces, and it was predicted, as early as 1864, that these would be filled by new elements.

The discovery of *Gallium*, in 1875, by Lecocq de Boisboudran, verified the prediction, as this metal fills the gap between Aluminium and Yttrium on the one hand, and between Zinc and Arsenic on the other. Here, again, the spectroscope led to the detection of the new metal by a peculiar line in the violet.

In 1877, Serge Kern found among the platinum ores a new metal named *Davyum*, in honor of Sir Humphrey Davy.

Prior to the application of the spectroscope, quite a number of new elements had been announced by Ulgren, Bergmann, Mosander, Herman and Svanberg, all of which shared the fate of many others, and were rejected by more recent investigators, although some chemists, even the careful analyst, Fresenius, contended for the reality of at least one, Terbium. The difficulty of establishing their identity has been occasioned not so much by their intricate reactions, as by the extreme scarcity of the few minerals whose examination led to their announcement. Specimens from one locality did not yield the same ingredients as those from another, and because later investigators did not find the new elements in their specimens,

therefore, they argued, the discoverers must have been mistaken.

Hatchett discovered Columbium, in 1801, and was ridiculed for his announcement, but afterwards justified by the discovery of the metal Niobium (or Dianium), which proved to be identical with Hatchett's Columbium. And it appears that a similar result will occur in the verification of former discoveries in the domain of metallic elements, formerly rejected, but reinstated by recent research.

In 1878, Delafontaine announced the discovery of a new metal in Samarskite, to which he gave the name of *Philippium*, in honor of Philipp Plantamour, of Geneva. The same metal is claimed, under the name of *Mosandrum*, as a prior discovery, by J. Lawrence Smith, of Louisville, Ky., and a controversy is going on in regard to the priority of discovery. The spectroscope reveals an absorption band, due to this element, in the blue part of the spectrum, between F and G.

Decipium is announced by Delafontaine as another elementary ingredient of Samarskite from North Carolina, giving three absorption bands in the indigo.

In the same mineral are also found *Yttrium*, *Didymium* (which is now suspected to contain still another unknown element), *Terbium*, (now reinstated through its spectral characteristics), *Erbium* and *Thorium*. Many of these metals are also found in Swedish Gadolinite, and from this mineral, Marignac claims to have obtained still another new element, *Ytterbium*, named after Ytterby, the place of its occurrence.

Recently a paper of J. Norman Lockyer, read before the Royal Society, has excited an unusual amount of interest in chemical circles. From a carefully conducted series of experiments with *calcium*, *lithium*, *iron*, and *hydrogen*, he arrives at the conclusion that they are not simple elements, but compounds. His reasons for this assertion are the varying character of the different lines or sets of lines forming their spectra, the disappearance and reappearance of certain parts of their spectra, under varying conditions of temperature, the presence or absence of certain lines of these elements in the spectra of the chromosphere of the sun, and in those of the stars, etc. The impression is made by the report that some experimental data have been furnished to fortify the theory, advanced long ago, of the composite nature of all our chemcal elements. The deduction made from

the fact that series of closely related elements, have atomic weights graduated in regular progression, the hypothesis advanced by Sir Benjamin Brodie in his "Ideal Chemistry," the many otherwise inexplainable reactions of some of our elements of the present day, and finally the precedent of the decomposition of substances formerly thought elementary into different simpler components—all these point to the great probability of the composite nature of most, if not all, those substances, which are now designated as elements. The revival, however, of the old alchemistic phantom of the mutability of the metals at our will, is, to say the least, somewhat premature, although paraded in some of the newspapers as an accomplished fact.

DISEASES OF THE KIDNEY.

By John Bryson, M. D.

(Concluded.)

Diabetes Mellitus.

Unless we except Senators' contribution to Ziemssen's Cyclopædia, which cannot be reviewed here, the most valuable and important recent addition to the knowledge and literature of this disease has been made by Dr. Pavy, in his Croonian lectures, just published. His new and accurate gravimetric method for estimating the quantity of sugar present, normally, in the blood and urine, affords him additional grounds for reaffirming his well known views of the function of the liver in regard to hydrocarbons.

Stated in a few words, this new method consists in reducing the precipitated sub-oxide of copper, thrown down by the sugar present, to the metallic state, with electricity, and weighing it, thereby leaving the mind nothing to decide, leaving nothing to the judgment of the operator, but reducing all to a mathematical problem.

He very justly insists on the settlement of the great physiological problem, concerning which he and Bernard so widely differed, before procceeding to build up theories concerning the

causes and nature of diabetes. Through the various stages of his proceeding we cannot follow him, though both pleasure and profit would result from so doing. We must, perforce, content ourselves with giving his results on those points bearing on clinical medicine.

Summing up these results this able investigator says: "I strenuously maintain that, instead of the liver being a sugar forming, it is a sugar assimilating organ. Its great function in relation to sugar is to prevent this principle reaching the circulation to any material extent. I do not deny, and never did deny that sugar in minute quantity reaches the blood. The facility with which the amyloid substance it (the liver) contains is transformed into sugar renders it surprising that more is not permitted to enter: but it is one of the conditions of health that such should be the state of things existing. Under a variety of deviations from the healthy state, on the other hand, sugar, in more or less notable quantities, does reach the circulation, and, as a consequence, finds its way, correspondingly, into the urine."

He considers that the sugar eliminated is expressive of the amount entering the circulation. Whatever proportion of sugar is conveyed to the peripheral capillaries is conveyed also to the kidneys. Normally, this proportion is so small that the urine examined in the ordinary manner does not give a decidedly saccharine behavior. A larger amount of sugar reaching the circulation shows itself in a much more marked manner; and it is just this latter state that constitutes the condition known as diabetes. It is a minimum amount of sugar in the blood that characterizes health, and a larger amount that is associated with unnatural states. To maintain the minimum amount the liver exercises a sugar-detaining and a sugar assimilating function, and this prevents us from becoming diabetic.

The healthy person eliminates no material amount of sugar with his urine, whereas the diabetic voids it to the extent, it may be, of a pound or more a day. On looking at the state of the blood it is found that, in the healthy person, sugar is only present there in minute proportions, whilst in the diabetic it exists to a notable extent. In the diabetic the sugar-detaining and sugar-assimilating function of the liver is, for some reason, not exerted, and hence this extraordinary excess of sugar in the blood and urine. The question resolves itself into one of

the utilization or non-utilization of certain kinds of food material, viz: the carbo-hydrate kinds.

He now comes to the question, "*Why sugar should reach the circulation as it does in diabetes, in opposition to what occurs under normal circumstances?*" Or, posed in a better manner, "*Why is it that sugar passes into the general circulation in diabetes, instead of being prevented doing so to more than what may be spoken of as an insignificant extent in the healthy state?*"

In answer to this question we are presented with the following points:

1st. He noticed, many years ago, that ligaturing the portal vein, and thus allowing only the blood of the hepatic artery to reach the liver, caused the contents of the circulatory system to become highly charged with sugar. The urine did not, indeed, become saccharine, after this operation, but this fact is accounted for on the grounds of the withdrawal of so large a quantity of blood from the general circulation and its accumulation in the ligated vena-porta, thus lowering the blood pressure in the renal areas, so as to prevent the secretion of urine to more than an insignificant extent. Struck with the effect of allowing only arterial blood to circulate through the liver, Pavy then attempted to connect the portal vein with the right renal vein, so as to maintain the circulation through a diverted channel, and thus prevent death, which rapidly occurred after complete ligation of the portal. Rapid coagulation, occurring in the connecting tube, prevented success.

2d. The injection of defibrinated arterial blood into the portal system was then tried, the result showing that strongly-marked glycosuria is quickly induced.

3rd. The negative effect of the injection of defibrinated *venous* blood established the fact that the glycosuria was due to the influence of the oxygenated blood, and not to any other part of the operation.

4th. Attention was now directed to an effort to surcharge the blood with oxygen, so as to render the venous blood of the portal vein arterial. To accomplish this, first, super-oxygenated air with and without artificial respiration, then rapid artificial respiration of atmospheric air, and finally carbonic oxide, were, in turn, resorted to. Omitting details, the result was always the same; when the blood, and presumably the portal blood, was thoroughly surcharged with oxygen or carbonic ox-

ide (which was used solely on account of the tenacity with which it is held by the blood and carried over to the venous from the arterial systems) the urine became markedly saccharine, sometimes to the extent of 23 parts per 1,000.

Our author now turns to the position occupied by the amyloid substance in the system. "It will be perceived," he says, that venous blood is favorable and oxygenated blood is unfavorable to its accumulation. There is no organ in the body supplied with venous blood in like manner to the liver, and, in correspondence, nowhere does amyloid substance exist to a like extent."

"In contrast to the condition of the adult liver, the organ during the first portion of intra-uterine life is free from amyloid substance. It is a curious fact, which was many years ago pointed out by Bernard, that, during the first portion of fœtal life, the liver is free from amyloid substance, and sugar is found in the liquor amnii and the fluid of the allantois; whilst, during the latter portion, the liver contains amyloid substance, and no sugar is met with in the fluids that have been mentioned. This has always stood as a surprising and inexplicable phenomenon, but with the knowledge now possessed regarding the effect of oxygenated blood, it admits of a rational explanation. The umbilical vein, which contains arterial blood, is connected with the liver in its passage to the inferior cava, and must mainly supply the organ at an early period of fœtal life. It happens at this period that the liver presents a state of development greatly out of proportion, even to every other part of the organism. Text-books on anatomy tell us that, in the human fœtus, the organ at the third and fourth week of embryonic life constitutes one-half of the weight of the whole body. Under such circumstances the supply of venous blood to the liver from the chylo-poietic viscera must, therefore, be quite insignificant, and with the oxygenated blood from the umbilical vein the conditions will be such as to promote the transformation of the amyloid substance into sugar, thereby leading to the absence of the former principle in the organ and the presence of the latter in the liquor amnii and the fluid of the allantois. As fœtal life advances, the relation between the liver and the chylo-poietic viscera, as regards development, becomes altered. The former no longer continues to hold the same prominence over the latter, and with the increasing growth of the latter, it follows that

the amount of portal blood acquires more and more significance. Without appealing to any consideration regarding the precise anatomical disposition of the umbilical vein, in relation to the liver, it may be said to constitute a necessary consequence of the development of the chylo-poietic viscera that the liver must receive a relatively larger supply of portal blood, and in proportion as this advance occurs, and a preponderance of portal blood reaches the liver, so will the conditions be favorable to the accumulation of amyloid substance, instead of the occurrence of its transformation into sugar."

"Whilst the liver forms the chief seat of the amyloid substance in the body of the adult, it is not absolutely restricted to this organ. It has been recognized, also, in the pulmonary and muscular tissues; but observation shows that when present under physiological circumstances in these structures, it is only so to a comparatively insignificant extent, and this at a time when a reduced supply of arterial blood prevails. For instance, it is especially in muscles that have existed in a state of rest, and in those of hibernating animals during the period of hibernation that it is to be discovered, and it has been observed to disappear under the resumption of activity. The tissue of the lungs has been observed to yield it during hibernation, but under other natural states it is absent."

"In the case of the solidified lung of pneumonia, however, amyloid substance is to be met with to a notable extent. This I look upon as an exceedingly interesting fact; for it happens that under the circumstances existing we have a condition, as regards blood-supply, identical, it may be said, with that of the liver. The lungs, like the liver, receive arterial blood through the bronchial arteries, which may be compared to the hepatic artery, and venous blood through the pulmonary artery, which, for our illustration, may be looked upon as holding the same position as the portal vein. In a natural state the venous blood loses its character, and becomes oxygenated within the organ, thus furnishing a condition which is antagonistic to the accumulation of the amyloid substance. In the solidified lung tissue of pneumonia, however, on account of its imperviousness to air, the venous blood of the pulmonary artery will retain its venous character, and stand in the same position as the portal blood does to the liver. * * * * Evidence, such as is here presented, strongly points to its being through its

exceptional supply of venous blood that the liver is placed in a position for performing what it does in relation to amyloid substance."

He further thinks that the fact that amyloid substance is to be found in a number of structures in the fœtus, is due to the partially venous state of the blood distributed to these tissues, as compared to the highly arterial state in the adult.

That oxygenated blood promotes the transformation of amyloid substance into sugar, can, he thinks, be taken as established; but whether, as regards the sugar absorbed from the alimentary canal, it interferes with the formation of that substance from it, or whether the formation takes place and then the transformation back again into sugar, cannot be stated. "We know that under natural circumstances, the sugar derived from ingestion, and absorbed from the alimentary canal, becomes converted into amyloid substance." This he looks upon as the first step of an assimilative action carried on by the liver, but our knowledge does not enable us to follow this assimilative action, and state what next occurs, though he thinks it sufficiently well established that sugar gives origin to fat.

"In diabetes, the assimilation of sugar fails to be carried out. It may be that the condition of the blood interferes with the accomplishment of the first step, or the formation of amyloid substance, and thus leads simply to the passage of the principle, uninfluenced, through the liver, or it may be that conversion into the amyloid substance occurs, and that this, through the condition of the blood, is brought back again into sugar. The fact stands that sugar from ingestion is not stopped from reaching the general circulation, as it should be, and I incline to the opinion that a simple passage through the liver is what occurs."

In his previous writings, Pavy has stated that glycosuria could be induced by obstructing the respiration to the extent of producing asphyxia. He now notices this apparent contradiction, and says: "No inconsisteney, however, in reality exists, but, apart from this, the statements are statements of fact, and if they appear irreconcilable, the fault must lie with the power of explanation. Because the flow of oxygenated blood through she liver leads to the metamorphosis of the amyloid substance contained in the hepatic cells into sugar, and that of venous blood, under natural conditions, does not, it does not follow that amyloid substance is not convertible into sugar by

the influence of direct contact with venous blood. Indeed, when amyloid substance is mixed with blood, no matter whether it be arterial or venous, its transformation into sugar is very speedily excited. Now, the effect of obstruction of the breathing, is to produce impeded flow of blood through the lungs, and a corresponding general venous congestion, and under this state the hepatic cells will be subjected to undue pressure, which may lead to more or less transudation and direct admixture of their contents with the blood." In this way, he thinks the same effect may be produced as when the amyloid substance is injected, experimentally, into the jugular vein, an operation well known to quickly produce glycosuria.

Considering the bearing these physiological facts have on the production of human diabetes, he finally reaches a point where he is brought into contact with the nervous system.

Through the exposition of the results gained by Bernard and himself, in experimenting on the nervous system, in the laboratory, we do not need to follow him, since the outcome of this work is a part of the general literature of the profession. Broadly stated, his conclusion is that diabetes is caused by a paralysis of the vaso-motor nerves, controlling the size of the blood-vessels of the chylo-poietic viscera, this paralysis permitting a congestion of these viscera, and allowing arterial (oxygenated) blood to pass over into the portal vein. Regarding the seat of lesion of the nervous system standing at the foundation of the disease, he is inclined to the belief that it is to be found in some textured changes in the brain, and thinks there are two ways in which the effect (diabetes) can be brought about. After calling attention to the observations of Eulenburg, which go to show that the state of the arteries is affected by lesion of certain parts of the gray matter of the brain, and suggesting that the vaso-motor nerves distributed in the sympathetic, besides being connected with the spinal cord and medulla oblongata, pass up to spots at the surface of the brain, which stand in the position of cerebral vaso-motor centres, he says: "The vaso-motor system exerts an influence on the arteries which gives them their *tonus*, or keeps them in a certain state of contraction. The effect of destruction of the centers or tracts is to lead to arterial dilatation, by causing direct paralysis of the muscular coats whilst that of irritation is the converse. . . . Arterial dilatation may, however, be induced in another way, viz.,

by the action of the cerebro-spinal system controlling or inhibiting the activity of the vaso-motor system." As an example of this he refers to the influence of certain emotions on the condition of the blood-vessels of the salivary glands, and he says this may be considered to constitute an active form of vaso-dilatation, in contradistinction to that arising from paralysis of vaso-motor nerves.

"There being these two modes of action by which vaso-dilatation may be brought about, it may happen that diabetes may arise either from a lesion effecting and involving a loss of power in vaso-motor centers, or a lesion in some part or other of the cerebro-spinal system leading to an inhibitory influence being exerted upon them."

In this connection attention is called to certain vascular and peri-vascular changes recognized by Dickinson in the brains of persons who have died of diabetes, and the results obtained by Drs. Frederick Taylor and Goodhart, which seem to contradict the observations of Dickinson. The ground, he thinks, however, has been prepared by physiology, and we must now look to the fruits derivable from pathological study.

Finally, his clinical experience of diabetes has led him to form the idea that diabetes presents an alliance, as regards the character of its progress, to locomotor ataxia and progressive muscular atrophy. "We have in each of the cases different manifestations of disordered nerve-action to deal with; but, as in the disease named diabetes, certainly as it occurs among young subjects, it is a truly progressive affection. For instance, when such a subject falls under observation during the early period of the disease, it will be found that by dietetic management alone the urine may be deprived of sugar and the health restored. Later on, sugar reappears notwithstanding the most vigorous dietetic management be persistently adopted. It may happen now that the administration of opium, morphia or codeia will again remove the sugar. Again, however, the urine becomes saccharine and its saccharine character gradually augments. With this the patient notices that he is losing ground in general health. He experiences more or less of a return of the old symptoms which troubled him at the outset before his eyes were opened to the nature of his complaint. No impression now can be made on the disease as formerly, and it appears to me we can only assume that the pathological con-

dition which is at the bottom of it must have gradually advanced. The ordinary duration in these progressive cases, I think we may say, is about two years. Sometimes it is much shorter, sometimes longer; and, as in locomotor ataxia, the condition may advance to a certain point, and then remain stationary for a shorter or longer while, the patient during this time being able, by a strict attention to treatment, to keep himself in a fair state of health. These remarks do not apply to the disease in elderly persons, for here, if the proper management be pursued, the tendency is toward progress in the right direction, if not even recovery, instead of towards the unfavorable issue."

A valuable contribution to our knowledge of the pathological anatomy of the diseases, has recently been made by Dr. Poniklo, of the University of Cracow. He has had the opportunity of making five post-mortems on persons dying of saccharine diabetes; attention was directed to the sympathetic nerve, and the whole tract of it was excised and submitted to careful examination.

In all the cases an increased amount of connective tissue in the ganglia was found, especially in the upper and lower cervical. This change consisted partly in an hypertrophy of the connective stroma occurring in the sympathetic ganglia, and partly in the accumulation of newly-formed connective tissue between the nervous elements, a change that was beautifully seen in transverse sections of the ganglia. In some sections the amount of connective tissue was very great, and only rudiments of nervous tissue could be detected. The capsules of the nerve-cells appeared to be thickened, having numerous granules adhering to them. In some parts numerous cells, partly round, partly fusiform or elongated, were deposited between the fibres of connective tissue, this cellular infiltration being most marked round the blood-vessels.

He found in one case abnormal dilatation of the blood-vessels in the solar ganglia, the vessels being tortuous and distended with corpuscles. In some of the microscopical preparations these dilated blood-vessels covered nearly half of the field. In the outer spaces, between the nervous elements, irregular accumulations of red-blood corpuscles, the result of small hemorrhages, were observed.

The nervous elements themselves presented the most inter-

esting changes. The nerve-cells, the capsules of which were thickened as above described, appeared to be of smaller size than normal; their protoplasm was more homogeneous, especially in those parts of the ganglion where the cellular infiltration predominated. In one case, a young subject, there was a decided amount of dark yellow or brown-colored pigment in the nerve-cells. Turning now to the nerve-fibres, it may be mentioned that, in the normal ganglia of the sympathetic, in addition to the bundles of gray non-medullated fibres, there occur a fairly large number of *white medullated* fibres, arranged partly in separate bundles enclosed within a distinct sheath of areolar tissue, and partly intermixed in the bundles of the non-medullated fibres. In the sections of these cases of diabetes no bundles of medullated fibres were found; but here and there isolated and extremely atrophied white fibres could be distinguished in the midst of the gray, which were well preserved in the preparations. These last named fasciculi were even much atrophied, the bundles being small and the individual fibres wasted, and in parts almost concealed by cellular infiltration.

The changes in the connective stroma of the ganglia, above described, sufficiently accounts for the atrophy of the nerve-fibres and cells, an effect very frequently observed in the other parts of the nervous system—*ex. gr.*, in the brain and spinal cord—where there is hypertrophy of the connective tissue. It must, however, be reserved for future investigations to ascertain whether this atrophy of the nerve-fibres does not extend higher up in a centripetal direction.

The above-mentioned changes were met with, to a greater or less extent, in each of the five cases examined, and they presented an excellent illustration of extremely advanced degeneration of the cervical sympathetic ganglia.

These results are in exact accordance with our physiological knowledge. We know that injuries to the lowermost cervical and uppermost thoracic ganglia, together with certain connecting filaments between them, will give rise to melliturie (Pavy, Eckhard, Cyon, Aladoff); but it is not so certain what influence the solar plexus has in this connection. Perhaps changes here are more intimately associated with the polyuria and polydipsia which are observed in some, but not in all, cases of saccharine diabetes. As the solar ganglion was found abnormal in one of these cases by Dr. P., it would be interesting to know how this

one compared with the others in respect to thirst and excessive urination.

The frequency with which the pancreas is found diseased in persons affected with diabetes has recently attracted a good deal of attention, and a number of cases have been reported. Cancer, fatty degeneration and atrophy are among the most frequent lesions noticed.

M. Lancereaux, remarking on some specimens of diseased pancreas, taken from persons dead of diabetes, said: "These specimens show that diabetes mellitus is, in some cases at least, accompanied by grave alterations in the pancreas. A similar alteration has been found in many recorded cases of diabetes, and in those cases, as in ours, the disease, the progress of which has been relatively rapid, and the termination fatal, showed itself by polyphragia, polydipsia, excessive emaciation, abundant glycosuria--in a word, by all the characters of diabetes. On the other hand, the animals in which the pancreas has been extirpated or destroyed become voracious, rapidly emaciate and soon die. Now, bearing in mind the peculiar character of the diabetes in these cases of alteration of the pancreas, phenomena observed in animals after the destruction of this organ, we believe we can conclude that there exists a causal relation between these grave lesions of the pancreas and the cases of diabetes mellitus in question. This form of diabetes shows itself by a suddenly commencing emaciation, with polydipsia and polyphragia, and the peculiar character of the alvine dejections. The prognosis of this diabetes will be very grave. The indications for treatment are to forbid substances digested by the pancreatic juice, and to nourish the patient by food digested in the stomach."

Seeing that the pancreatic juice is both proteolytic and amylolitic, it would be interesting to know just what substances, in the way of food it does not digest, or have to do with the digestion of.

With regard to the frequency of disease of the pancreas in diabetes, there is good reason to think it occurs in fully one-half of the cases, (Senator). Klebs believes that the co-existance of diabetes mellitus and disease of the pancreas depends on lesions of the cœliac plexus: either the disease starts from the pancreas, encroaches on the plexus, and gives rise to the diabetes by destroying its ganglia, or else the cœliac plexus is first attacked, and in consequence thereof circulatory disturbances

arise in the territory supplied by the cœliac artery, which lead to degeneration and atrophy of the pancreas.

A case of diabetes mellitus with atrophy and cystic disease of the pancreas, was recently reported to the Philadelphia Pathological Society, by Dr. M. Longstreth.[1] The patient was a physician, æt 55, whose urine, with a specific gravity of 1044, was loaded with sugar and whose fæces, examined by Dr. R. M. Bertolet, contained "mucus, epithelial cells in various stages of disintegration, and foreign matter; but the great bulk composed of fat in the form of spherical masses, composed of dense aggregations of minute crystals, such as are presented by margarine. It is readily soluble upon the addition of chloroform under the slide." Before death the diarrhœa had confined him to bed; the passages being of the consistency of sweet oil.

In the matter of *therapeutics*, Ryba and Plumert have arrived at the following conclusions regarding salicylate of soda:

1. Salicylate of soda, given in daily doses of eight grammes, determined a decided diminution of saccharine excretion. 2. Considerable differences are observed, according to the severity of the case. In recent cases the sugar can be made to disappear completely, and does not appear immediately after the remedy is stopped. In cases of longer duration the effect of the remedy is also apparent, though the sugar does not disappear entirely, nor is there a favorable after-effect. In cases of several years duration, with severe diabetic symptoms, there was no effect. 3. The diminution of saccharine production is rendered more remarkable by the greatest restriction of hydrocarbons in the diet. 4. Diminution of the quantity of urine is parallel with the diminution of sugar; but in one case, the polyuria remained in spite of the considerable diminution of saccharine excretion. Other diabetic symptoms and the bodily weight are favorably influenced. 5. In two cases the quantity of both urine and sugar was increased for a time after the commencement of medication, followed, however, by progressive diminution. Treatment by salicylate of soda is followed by a greater diminution of sugar excreted than when the treatment is indifferent.

We notice several cases of reported cure of this disease, by the skim-milk treatment of Donkin. In some cases the patients are entirely unable to take skim-milk as their only food; and others who have been able to do so are not cured, or even benefitted by its use.

1. *Philadelphia Med. Times*, June 22nd, 1878.

Dr. Eug. Zarzana, of Italy, reports two cases cured by nux vomica. In the first case, a woman, who had had the disease at least three years, the quantity of urine was large, as was also that of the glucose. At first she was given, daily, three-fourths of a grain of the nux vomica; and afterwards this was increased by three-fourths of a grain every third day until she was taking 4½ grains per day. Under this treatment the urine diminished and became very acid, flocculent and colored by biliary pigment. At the same time the glucose diminished to a mere trace. General symptoms improved and the patient was restored to her previous good health.

The second case was a man æt 72, large and robust. The quantity of urine was large and it was rich in urates and albumin. Under the use of nux vomica the glucose diminished and finally disappeared entirely.

M. Martin, experimenting on the effect of liquorice-infusion, on the excretion of sugar, in one case of diabetes found it had not the slightest influence; though his patient drank daily about one quart of the infusion of liquorice root, and also sweetened his coffee with it.

It is well-known that there are certain forms of sugar that can be made use of, not only without detriment but with positive benefit, by even the worst cases of diabetes. If liquorice sugar can, on further trial, be added to this class, good will be done in more ways than one. The greater variety of diet a diabetic can have, the more certain he is to adhere to it.

Salicylate of soda and phenol have been found to be of most service in diabetes by Fürbringer; and their value, in a given case, seemed to be greatest when they diminished the excretion of nitrogen. When this effect failed, the hope of diminishing the excretion of sugar was small.

Experiments with quinine, arsenious acid, pilocarpine, and benzoate of sodium gave unfavorable results none of these having much effect in diminishing the excretion of sugar; the latter even increased it.

Treatment of diabetes by thymol, oil of turpentine, digitalis and bromide of potassium are contraindicated. Digitalis does, indeed, seem to diminish the excretion of sugar and nitrogen, but it is by the disturbance of the digestive canal which it provokes, and which causes these products to be excreted by the intestines, and also less food to be taken.

TRANSLATIONS.

CONTRIBUTION TO THE CLINICAL STUDY OF GONORRHŒA IN THE FEMALE.

By A. Wolff.

The interesting work before us contains the results of observations made by the author, for a number of years, at the syphilitic clinic of Strassburg, on gonorrhœa (blenorrhœa) in the female.

Certain portions of the genital mucous membrane of the urethra and of the glandulæ Bartholini, seem to be especially predisposed to this affection: so that urethritis and Bartholinitis are the most frequent gonorrhœal affections in woman. On the other hand the vulva and the vagina seem to resist the infection to a certain extent; they even acquire a certain immunity, in as much as, having once been relieved of an acute attack of gonorrhœa, they are rarely affected a second time.

Whenever the author finds other parts of the genital mucous membrane, besides that of the vagina proper, affected, he regards the case as one of first infection; if, however, he finds an isolated Bartholinitis or urethritis without any tendency to involve the vagina, he thinks the patient is not affected for the first time. When the vagina alone is affected, we can almost always detect symptoms of a preceding Bartholinitis or urethritis.

In 705 cases observed by the author, gonorrhœa of the urethra was observed in 439 cases, *i. e.* 62 per cent., 257 of these occurred in combination with other forms.

Bartholinitis was observed in 383 cases, *i. e.* 54 per cent.; in 130 of these it was detected on both sides, in 123 on the right and in 130 on the left side alone. In one-half of these cases other parts were affected at the same time, especially the urethra (83) and the cervix (28). Abscess of the gland occurred 52 times; 36 times on the left and 16 times on the right side. The large percentage of Bartholinitis observed is probably due to the fact that in many clinics this affection is not sufficiently appreciated, *i. e.* not observed so often.

The reason why the gland of the left side is affected so much more frequently than that of the right is not apparent. In many cases the author could prove the direct connection between Bartholinitis and infection by confrontation. Frequently the gland is affected *primarily*, (the case of a girl is given whom the author had an opportunity to examine thoroughly a short time before her defloration).

Catarrh of the cervix is probably gonorrhœic in character if there is specific Bartholinitis at the same time. In 149 cases the vagina was affected; *only* 14 *of these cases occurred in prostitutes* enrolled for more than a year. Vulvitis was observed 15 times. 2 cases reported as gonorrhœa of the anus proved to be fistulæ of the rectum.

For the treatment of urethritis the author highly recommends the solid nitrate of silver. Good results were also obtained in a number of cases with a solution of silicate of soda (1-3 per cent). (Comp. *Wolff*, De l'emploi du silicate de soude dans le traitement de la blenorrhagie, Strassbourg).

In Bortholinitis injections of nitrate of silver 1-2 per cent., are recommended.

[Reviewed by E. Hüter in *Centralblatt* für Gynäkologie, No. 1, 1879.] E. E.

The Poison of Syphilis.—At the last congress of German naturalists, Klebs detailed his experiments made to detect the nature of syphilitic poison. If pieces of a Hunterian chancre are placed into a solution of gelatine, a vegetation of fungi is speedily observed. This consists of minute rods, at first of lively mobility, which array themselves subsequently in oval masses. The cultivation of this fungus was continued by transferring some germs into fresh solutions of gelatine. Small quantities of this turpid fluid were placed underneath the skin of a monkey. After six weeks the animal suffered from indurated ulcers in the mouth of a decidedly syphilitic appearance. The autopsy revealed, besides, syphilitic alterations of the dura mater and of the lungs. In another monkey similar syphilitic appearances were caused by direct inoculation with a portion of a Hunterian chancre. Different tissues and especially the blood of these animals placed into solutions of gelatine gave rise again to the above described fungus. Klebs here claims, that this fungi constitute the syphilitic virus, and proposes to call them helicomonads. [*Centralbl. f. Chir.—Chicago Med. J'l and Exam.*

EDITORIAL.

DR. A. J. STEELE, *Editor.* DR. W. A. HARDAWAY, *Associate Editor.*
PROF. E. W. SCHAUFFLER, M. D., *Corresponding Editor.*

"It is not so much what you ought to do, as what you ought to know not to do."—*Sir Benjamin Brodie, Lectures*, 1837.

SPECIALISTS, THEIR RELATION TO GENERAL PRACTITIONERS.

IF the practice of certain specialists is honorable and just, then another Section should be added to our Code of Ethics, or one of its already existing Sections be abrogated. For if a patient seeking professional advice, goes to the office of a specialist, he gives it, without regard to the fact that the patient may lately have been or is at the time under the care of another practitioner; or, if called to the house to see a case in his special department, he certainly attends, even though the family physician may previously have been consulted and have prescribed. In other words, that being known as, and actually being a specialist, it is his privilege and duty to take a case without regard to the relation the patient may hold to the general practitioner.

Now, Article V., Section 4, of the Code, declares that a physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired. The American Medical Association has further declared by ordinance (*vide* Trans.,

Vol. XX., p. 28) that, while specialties are proper and legitimate fields of practice, yet that specialists shall be governed by the same rules of professional etiquette as have been laid down for general practitioners.

Thus it would seem that our specialist is at fault, if not with his own sense of justice, yet certainly with the plainest interpretation of the Code as it now stands.

It may be that some specialists, in becoming such, considered that they placed themselves outside the pale of the privileges and obligations of the profession at large. If so, however, they have not had the hardihood to proclaim it.

When the framers of the Code drew up the present admirable rules of conduct, now some 32 years since, they were not familiar with specialists as such, nor did they anticipate the present reign of single-branch men, otherwise they would have introduced exceptional clauses providing for the status of practice as now found in large cities. Or possibly did they, with far-reaching ken, realize the present deluge of specialists, and determine that they too should be governed by the same rules of professional relationship as general practitioners; all members of the same calling, all amenable to the same code?

If the oculists and neurologists and gynæcologists will cut aloof from the body medical, cease to be merely departments of medicine, and merge into distinct professions by themselves, as have done the dentists, then they may become independent of the restrictions now controlling, and may establish exclusive ethical codes.

A seeming antagonism exists between the general practitioner and the specialist, the latter self-confidently "knows his department thoroughly, better in fact than any one else;" while the former, with comprehensive views of the whole field, sneers at the man who is limited to a single department.

A venerable physician tells us that formerly he practiced in all departments, but a few years since, when the specialistic furor became rampant, he felt it his duty to

send to such, his uteri, and eyes, and throats, and ears, and skins, and nerves, *et id genus omne*, which were absorbed by the specialists as if theirs' by inherent right, their appenage. He had little left for himself, his cases were gone, so some of his families, and much of his income, and he failed to learn that the results to patients were much better than when he, with comprehensive views of the whole field, did the best he knew for all.

It is to be expected that the present, the older, generation of physicians, will be jealous of the specialists, as, the latter are innovators. But this will cease in time, when the older are supplanted by the newer men now entering the arena, who, finding practice thus divided up and apportioned, will accommodate and harmonize themselves to what is.

There would seem to be danger that the specialists, with their exclusive societies and journals, might gradually float off from the body medical, and, instead of being necessarily incorporated into, be only embellishments or grafts on. This fact has each year more and more emphatically been forcing itself on the attention of the American Medical Association, which, originally, without any "sections" for special work, soon established three or four, increased later to six, and at the meeting held last spring in Chicago it was still further proposed to organize two or three more. This may go on till the Association, with its numerous "sections," becomes a veritable pasha with many tails. It is very reasonably urged that physicians prosecuting special lines of study and work will, like the birds of a feather, congregate and have their own societies and literature, and that it were wise for the National Association to recognize this fact, and throw its arms around these specialists, and not allow them to drop off into isolation, but rather foster them, incorporate them, make them an essential part of itself and to feel that they are necessary elements of one and the same grand whole—noble profession. If this is not done, and the dozen or more specialties become distinct, each by itself, the profession as such

will become lamentably broken and weakened; a consummation in perspective not at all pleasant. The words of Webster, with a new application, come to mind: "When my eyes shall be turned to behold for the last time the sun in heaven, may I not see him shining on the broken * * fragments of a once glorious union."

Specialists and generalists are all members of the same brotherhood, iconolaters all, worshipping the same image —Medicine, enthroned in purity and with a blessing for every true votary.

It is not for us to question the advisableness of a code of ethics. It has been instituted by the National Association, and sanctioned by the profession at large, and has been translated into foreign tongues and adopted by the professions of other nations. That there should exist the necessity for such rules, we regret. Had all physicians a keen sense of honor and high tone, it might be abrogated; but such is not the fact. While the accomplished and honest practitioner does not require it, still he cannot object to it, for it merely expresses in language and makes a rule of action what he has already intuitively fixed in his heart. But to the innocently ignorant and willfully bad, it becomes a binding law, the enforcement of which should be insisted upon by all true physicians.

The specialist cannot afford to ignore a single provision of the Code; by disregarding it, in his zeal to get a new case, or make another fee, he may forfeit the friendship and good opinion of some venerable nestor of the profession, which eventually may be of ten-fold more detriment to his pocket and professional standing than if he had acted strictly in accordance with the ethics.

We fully realize that one of the banes of our calling is the immediate necessity that so universally exists for means to secure a livelihood, and thus, through want, the young graduate especially is tempted to ignore, and act contrary to the Code. Again, we are told that the honest practitioner cannot compete with the knavish charlatan, that the burden falls too heavily and unjustly on the for-

mer. Like to the honest citizen who makes true return of his property to the assessor, and pays full taxes on the same, while dishonest nabobs by the score, make false returns, evade the law, and thus throw an unjust proportion of the municipal expenses upon the upright citizen. Nevertheless, in the long run, it pays to be honest. One of the greatest misfortunes that can happen to a man, to a physician, is the consciousness that he is capable of a dishonest act, once admitted, once committed, then *facilis descensus averni.*

Some, possibly, glory in the fact that they have never even read the code of ethics. The more shame then to them. Better reading, more noble sentiments cannot be found. It would not be too strongly emblazoned if placed in letters of living light, that every medical student and practitioner should have it indelibly stamped on their hearts.

We would have no fears for the professional ability or integrity of specialists, if they became such by a long course of study and practice in general medicine. In such case, having knowledge of, and experience in all departments, they would never lose their love for, nor interest in the broad field of general medicine. A large portion of the several thousand young men now graduating at the medical schools of this country expect to enter at once into a special field of study and practice, as a result there will be many failures and much empiricism. We know of a few notable exceptions among specialists, who, realizing the danger of drifting into a narrow rut, exert themselves to keep up an interest in the profession at large and in the various departments of medicine.

Specialists whose names are acknowledged authority followed the lead which presented itself as the years went on, were not so at the beginning, had no thought of what the future would determine. Our advice to a recent graduate would run like this: Do not limit your study or practice; but if you have a *penchant* for any one department, nurse it, cultivate it, improve every opportunity to observe facts bearing upon it, keep a full index of its literature,

in other words, *do not be a specialist, but have a speciality*, and the result will be, that after a few years have elapsed you will be able to judge of your fitness for, and of the advisableness of an exclusive practice.

The present style of practice in cities and large towns is far different from what it was twenty years ago. The old family doctor, the factotum, the adviser for all troubles, physical, mental and spiritual, is a thing of the past; he has been crowded to the wall and supplanted by the specialist. Even the people understand that there are doctors for every organ. We know a family where five doctors were in attendance at the same time, for different ailments in different persons. A limit will, after a time, be reached in specialisms, and possibly the pendulum will settle back very greatly. In the mean time, we all must cling to our one profession—medicine—guard well our honorable membership to it, and specialist as well as general practioner, be amenable to its ethical rules as now accepted.

A. J. S.

STATE BOARD OF HEALTH FOR MISSOURI.

Some of our friends in different parts of the State are moving in the matter of a Board of Health for Missouri. We heartily second their efforts, and sincerely trust the present session of our Legislature may witness the passage of a bill such as we now offer for consideration or one equally as good.

The best interests of our State, and the cause of humanity, which cannot be ignored, dictate that the public health shall be jealously guarded. This may be most wisely secured by the legal appointment of an authorized board whose efforts shall be in the direction of scientific labor, diffusion of hygienic knowledge, practical work and advisory counsel. The times are too advanced to demand a panegyric on public hygiene. Far more important is the prevention than the cure of disease. Every hour's sickness

prevented is just so much money saved to the commonwealth. The greater the health of a nation the greater will be its wealth and prosperity.

No more noble action can be attributed to any class of men, than is the unselfish conduct of physicians in their efforts to conserve public health and prevent disease. So enigmatical was this question to the lay members of the Mississippi Legislature, that they believed there was some covert reason prompting physicians of that State to advocate measures looking to the prevention of just what they depended on for subsistence, viz., disease, sickness. Noble, self-sacrificing philanthropy is above the comprehension of many a sordid mind. Philanthropy, pure and unselfish, has always been and, we predict, ever will be a characteristic of our profession, evidenced by what has already been accomplished for State medicine. Longevity is now so much greater than it was a hundred years ago, that insurance companies have changed their life-tables, to the great advantage of the insured, and the future portends still more.

The subject of public hygiene, or State medicine, has of late assumed large proportions, and is deservedly attracting much attention, not only from physicians, but also from philanthropists and legislators. This is attributed to the advance made in our knowledge of the laws governing disease, and is also in keeping with the elevated tone of our present civilization. Such beneficial results have accrued from labors in this field that the most skeptical have been convinced and the most unconcerned startled.

It is true, our State is not densely populated and its larger towns are not numerous, yet within its boundaries are a people whose health and lives are just as valuable as though their number were tenfold greater. It is rapidly filling up however, a population of five million souls is a question of but a few years, and it were wise to provide for the future. Diseases are not as rife as in other less favorably located and more populous sections of our country, yet they do exist and can largely be prevented.

Let every physician throughout the State urge upon the representative from his district the importance of moving promptly in this matter, that at once we may be able to join our sisterhood of States in this most beneficent public sanitary measure.[1]

After much investigation we have drawn up the following bill as fully meeting the present indications.

A. J. S.

An Act establishing a State Board of Health for Missouri.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Members, how appointed.

Section 1. The Governor of the State, by and with the concurrence of the Senate, shall appoint six persons, who (with a secretary, as provided by another section of this act) shall constitute the State Board of Health. These appointees shall be citizens of the State, four of them physicians of not less than ten years' practice, and two, men eminent for their scientific attainments. They shall hold office for six years, provided that of the first board the term of office of one of its members shall expire annually on the first day of January, and in an order to be determined by lot among themselves. All vacancies shall be filled by the Governor, the Senate concurring, and any member may be eligible to reappointment.

Eligibility.

Term of office.

Vacancies, how filled.

Duties of.

Sec. 2. The Board shall take cognizance of the interests of life and health among the citizens of the commonwealth. They shall make sanitary investigations, and inquire into the causes of disease and the sources of mortality among the people, and the effects of localities, employments, conditions, habits and circumstances on the public health; and they shall gather proper information on these matters for diffusion among the people.

1 Let it not be supposed this subject can be understood only by medical men. Its facts appeal to reason, and the beneficent application of results to common sense. The stamping out of jail fever and the abatement of scurvy, formerly two of the most destructive of scourges, were due to the efforts of John Howard and Captain Cook, men without medical learning.

They shall consider the best means of obtaining and registering vital and sanitary statistics, and shall act as an advisory board to the State in sanitary matters, and in regard to the location, construction and administration of public institutions. They shall in the month of January of each year make to the Legislature a report of their doings, and, if deemed best, suggestions as to legislative action. They shall make by-laws for their own regulation.

Time and place of meeting.

Sec. 3. The Board shall meet quarterly (oftener, if necessary), and at such places as they may deem expedient.

Officers, when elected.

Sec. 4. The Board shall elect annually, at its first quarterly meeting, a President and Secretary. The latter, if not already a member of the Board, becomes such by virtue of his election and so remains during his incumbency. He shall be the executive officer of the Board, shall perform the work prescribed by this act, and such other duties as may be required, and shall be allowed an annual salary to be fixed by the Board.

Secretary, duties of

Salary of.

Expenses.

Sec. 5. The members of the Board, with the exception of the Secretary, shall receive a *per diem* compensation for their services while engaged in the duties of the Board. These and other expenses incurred in the execution of this act shall be audited quarterly by the Board, approved by the Governor, and paid out of the State Treasury in the same manner as for other departments of government. To carry out the provisions of this act there is hereby appropriated out of the Treasury of the State a sum not exceeding five thousand dollars, to be paid quarterly, as provided.

How paid.

Appropriation.

Time of the first meeting.

Sec. 6. The time and place of the first meeting of the Board shall be determined by the Governor.

To take effect.

Sec. 7. This act shall take effect upon its passage.

TAX ON DOCTORS.

The members of the profession in St. Louis have lately been very much exercised in regard to a special tax levied upon them by the city authorities. An ordinance was passed by the council in 1876, to the effect that each practicing physician should pay a yearly tax of $25.

At a meeting of the profession called in May, 1877, a committee was appointed to collect moneys to defray the expenses of legally resisting such unjust taxation. Dr. Wm. Johnston, as a test case, was sued, and judgment in the first court, rendered against him *proforma* or by agreement; appealed to the second court, judgment rendered in his favor, and the case rested.

About the same time the lawyers went through a similar experience; the Court of Appeals deciding in their favor, the Supreme Court, however, reversed the decision, declaring for the city. Whereupon the collector proceeded to demand payment for license, notifying physicians that $50, for the years 1877–78, were due, failing in the payment of which, arrest and imprisonment seemed the alternative. However, still plucky, the profession, determined by resolution, at two called meetings, held last January, to resist the payment. The dentists were equally interested with the physicians, and conjointly committees were appointed, one to memorialize the State Legislature to remove the power of the City Council to tax doctors, lawyers, dentists and ministers, and the other to address a circular letter to all the physicians throughout the State to instruct their representatives to advocate such an Act. As a result of this, the bill has lately passed the lower branch of the Legislature by a large majority, and is now before the Senate with the probabilities of its becoming a law.[1]

While a revenue is necessary to carry on a municipality still this special mode of increasing it were unjust. A

1. Since this was put in type we understand the bill has passed both branches of the Legislature.

merchant's *goods* are taxed because there is *material* representing money; but a physician's capital is his brains, and if this can be legally assessed then why not include the minister, professor, school-teacher, editor, author, architect, civil engineer and all who depend upon their mind action or brain culture for a subsistence. Where draw the line? Exclusive class legislation were not wise. Besides if practicing physicians are to be taxed let it be in amount according to their incomes, not *per capita.*

Many a young and many an impecunious physician, with an income of but a few hundreds, would find a yearly tax of $25 a burden, while more favored ones, with incomes of as many thousands, would not mind it a straw's weight. If assessment is necessary, let it be equalized.

Very properly the government places high duties on luxuries—tobacco, wines, silk, etc., so let it tax the luxury of the knavish, traveling charlatan. While it permits such gross injustice, a blot on the escutcheon of our nation and age, may it look in that direction for income. Quacks and patent medicines of all kinds, if taxed in proportion to the enormity of their evil influences, would go well towards cancelling the municipal obligations, and let the honest, law-abiding, physician-citizen go free. If the government will only legislate against and stamp out quackery, no cry will then go up from the doctor if he is called upon to pay an annual stipend of $25, as a tax.

TAX ON DOCTORS' BUGGIES.

In another matter, also, the city physicians are at opposites with the municipal authorities. A year or more since an ordinance was passed taxing vehicles of all kinds, buggies $3 per year. A few doctors paid, but the large majority have neglected so to do. The legality of the act has been tested and lately decided adverse to the city. Whereat ye poor doctor rejoiceth. S.

THE STATE MEDICAL ASSOCIATION.

A few days since, Mr. Marmaduke, mine host of the Sweet Springs Hotel, where last year the Association was so royally entertained and where we were expecting to reassemble in May of this year, called on us to say that the coming season (for 79) would not open until the middle of June, and therefore, unless the Association postponed its meeting one month from the time appointed, it would have to be held elsewhere. Last year's experience proved to the Sweet Springs Company that the pleasure and recreation seeking public did not appeciate and support an early opening, and to attempt to entertain the Association this year in May would be attended with an unjustifiable pecuniary loss.

Mr. M., while regretting to so disappoint, is very urgent that the Association shall postpone the date of meeting till the third Tuesday in June, at which time the Sweet Springs Company will be able to make its gathering most delightful.

It will remain with the officers of the Association to at once determine whether it were better to postpone the time of convening one month, or change the place of meeting. There are cities throughout the State that have never been honored with the presence of the Association, which would on such an occasion, extend a very hearty welcome to the profession.

When it was being determined where the Association should meet this year, Columbia, the site of the State University, extended a pressing invitation and urged its claims strongly. It would, we believe, please the St. Louis delegation to visit Columbia in May if the Committe decide adverse to changing the time of meeting and thus throw us out of Sweet Springs. S.

The Missouri Medical College.—This venerable institution held its thirty-eighth annual commencement exercises on the evening of March 5th, at Mercantile Library Hall. A crowded audience, a large graduating class (eighty-eight in all), a very able address by Prof. Robinson, inspiriting music and bouquets *ad libitum*, all tended to render the occasion pleasant and profitable. The event marked the close of the winter semester, a resting from labors gladly accepted by teachers and pupils. In addition to the usual conferrence of degrees, there was an awarding of prizes to students for proficiency in different branches, to-wit: surgery, anatomy, chemistry, gynæcology and nervous diseases, and for general excellence.[1]

The Missouri Medical College is certainly to be congratulated on the high rank she has taken and the good work accomplished.

Alumni Banquet of the St. Louis Medical College.—The month of March usually brings vividly to the attention of the community the fact that there are medical colleges and doctors in the land. The present season, here in St. Louis, has been no exception, and among the public exercises with which we have been regaled, none have been more enjoyable than the annual reunion of the St. Louis Medical College Alumni.

The banquet was held on the evening of March 6th at the Lindell Hotel, some eighty or more sitting down to the well spread tables. A feast of reason and a flow of soul was the necessary accompaniment of the more substantial feast and flow. Toasts with most happy responses beguiled the moments enlivened by the strains of sweet music.

Too great a meed of praise cannot be awarded the very efficient committee having the matter in charge. Such a fraternity of professional feeling and relaxation from busy care was permitted, that we can wish for many returns of the Alumni banquet.

1. In regard to the wisdom of holding out prizes as a stimulus to increased study we shall have somewhat to say in a near future.

The St. Louis Medical College held its thirty-seventh annual commencement in the Mercantile Library Hall, the evening of March 7th. The audience was unusually large and brilliant, thus proving in the most gratifying manner the deep and great interest manifested in the cause of medical education by the general public. The exercises were opened with prayer by the Rev. Dr. Ganse, after which Prof. John T. Hodgen, Dean of the Faculty, conferred the degree of Doctor of Medicine upon fifty-eight graduates, at the same time proffering them plain, practical advice for their guidance upon the untried and untrodden road before them. The valedictory was delivered by Prof. E. H. Gregory. He urged the graduating class to be energetic, patient and brave; to mingle much with medical men and to support medical societies. This able address was replete with the fruits of a ripe experience, earnest sincerity and kindly feeling.

On the same occasion Prof. Eames, Dean of the Missouri Dental College, conferred the degree of D. D. S. upon a number of graduates of that institution.

We exceedingly regret to learn that George J. Engelmann, M. D., our able reporter on Diseases of Women and Children, is confined to his bed with a severe attack of erysipelas. About the middle of last December the doctor was poisoned in making a *post mortem* examination of a case dead from puerperal peritonitis and metritis; septicæmia of a virulent type immediately followed, causing the loss of a finger, and almost of life. Scarcely convalesced and barely able to be out, erysipelas set in, extending from the hand over the limb and side, attended with extreme prostration. With much sympathy extended to our collaborator, we hope a good constitution may soon restore him to patients and friends.

A SOCIAL GATHERING, composed of a large number of the profession of St. Louis, was held February 25th, at the residence of, and in response to an invitation from, Dr. Edward Montgomery. The entertainment was not simply gustatory in character but was intellectual as well, for in response to calls and toasts many excellent speeches were made and much good feeling engendered.

As the host, himself a most estimable Nestor of the profession, truly remarked: Fellow practitioners do not often enough meet for friendly and social intercourse, whereby, for the nonce, they may lay aside the mantle of professional care, and give expression by word and act to the inner feelings and sentiments of the heart, which after all redeem man from the mere animal.

"A HIT, A VERY PALPABLE HIT."—The good things our brother-journalists say (and we thank them) of our enterprise, and the commendatory letters and congratulatory expressions from friends far and near, make us vainglorious enough to believe that the COURIER is a success. And we are encouraged for the future, for increased experience must bring greater ability and knowledge of professional wants and subscriber's needs, to which we will gladly minister.

While not unconscious of faults and errors, we shall expect that with each issue they will become less frequent.

To contribute somewhat to the upbuilding of our profession in knowledge and honor, will be our ceaseless aim.

COMMUNICATIONS.

TRICHIASIS AND DISTICHIASIS.

Mr. Editor:—In the interest of historical accuracy, and in justice to several authors, living and dead, I ask your permission to correct, in the pages of your journal, a number of errors which I have noticed in a communication published in your last month's issue.[1]

(1.) The writer conveys the impression, possibly unintentionally, that recent authors have generally overlooked the existence of a true "distichiasis" as distinguished from the very common affection "trichiasis." This impression results from the fact that he quotes from Mr. R. Brudenell Carter to the effect that that author had never seen a case of true distichiasis, but passes over the brief though sufficiently exact notice of the affection by the American editor of Mr. Carter's book. I have, therefore, thought it worth the while to compare the descriptions of true distichiasis, taken from three of the textbooks now most current, with that given by the writer.

Schweigger: *Hand-book of Ophthalmology*, Am. Ed., 1878, p. 244.

"Distichiasis congenita is very rare. In this condition the cilia at the outer edge of the lid are normally developed, but from the intermarginal part, near the mouths of the tarsal glands, there springs a second row of cilia which lean against the eyeball."

Stellwag: *Treatise on the Diseases of the Eye*, 1st Am. Ed., 1868, p. 384.

"By distichiasis, or double growth of the lashes, we understand, strictly speaking, the growing-out from the surface or inner lip of the lid, of scattered hairs or of those arranged in a second row. The lid is in other respects normal. This condition occurs very rarely, and is then generally congenital."

Michel: St. Louis Courier of Medicine, Feb'y, 1879, p. 122.

"In distichiasis, when it is uncomplicated, we have true cilia precisely like the normal ones, arranged with great regularity in a row; they spring from the flattened (*sic*) tarsal margins, near their posterior or conjunctival edge, in the neighborhood of the openings of the Meibomian glands, and are directed towards the globe. Generally only the third of the superior eyelid, towards the ex-

1 Trichiasis and Distichiasis; reflections on their nature and pathology; with a radical method of treatment. By Chas. E. Michel, M. D., Professor of Ophthalmology and Histology in the Missouri Medical College.

Carter: *A Practical Treatise on the Diseases of the Eye*, Am. Ed., 1876, p. 184—*Am. Editor's note.*

"The occurrence of a partial supernumerary row of eyelashes, fairly justifying the name 'distichiasis,' is not excessively rare. We have seen at east one such case, doubtless congenital, in which the second row of cilia was very regular, and extended, in each eye, from the outer canthus for about half an inch along the margin of the upper lid near the row of openings of the Meibomian glands." ternal canthus, is affected, and in the cases which I have seen the deformity was symmetrical and bilateral; that is, the right and left superior palpebræ were similarly conditioned. This malformation is of embryonic origin."

These quotations may suffice to show that the affection under consideration is well enough known and that it has been perhaps sufficiently noticed in the text-books of the day. Has the writer, unconsciously perhaps, drawn upon any of these for his description as quoted above?

(2.) In reviving the very old subject of methods for the extirpation of faultily-directed cilia, or for the improvement of their direction, the writer uses these words: "For years, indeed very early in my professional career, I felt the inadequacy of our means for controlling these deformities, [distichiasis and trichiasis] and even then devised some of the methods which I later put into execution. I at once directed my efforts to the discovery of a sure means by which I could destroy the hair papilla alone." (page 125.)

These devises and discoveries of the writer may be best noticed in the order in which they are described, the earliest of them dating from the year 1869.

(*a*) Destruction of the hair bulb by the galvanic cautery.

This was first tried by the writer in 1869 and immediately abandoned by him, because he "at once perceived that the destruction of the tissues could not be regulated with this agent."

This method was fully described some twenty-five years ago by Middeldorpf in his standard work (die Galvanocaustik; Breslau 1854), Middeldorpf applied the galvanic cautery to all the uses to which the actual cautery by the hot iron had been applied in ophthalmic surgery, including, among others, that now in question.

A much better way of using the galvanic cautery, whether for the radical destruction of cilia or for the improvement of their direction by the production of an eschar upon the side of the follicle toward which the hair is to be drawn, is that described in the American Edition of Carter on the Eye, page 187.

(*b*) Splitting the hair-follicle with a broad cataract-needle and applying lunar caustic upon the tip of a fine probe, (a No. 8 sewing needle) to destroy the hair-bulb.

Stellwag (1st Am. Ed., 1868, page 391), referring to Mackenzie, describes exactly this procedure; he directs the puncture to be made with a broad cataract-needle along the shaft of the hair, and this to be followed by cauterization "with a silver probe dipped in liquid caustic potash." The use of a "very finely-pointed probe dipped in melted nitrate of silver," in the same way and for the same purpose, is recommended in a note to Malgaigne's Operative Surgery. (Am. Ed., 1851, page 285.)

(*c*) "Passing an armed needle through a small fold of the skin, in front of, contiguous to and parallel with the hair-follicle. The thread is tightly knotted, and soon cutting its way through, leaves a minute vertical cicatrix, pulling the follicle and contained cilium outwards."

This procedure, which is based upon the stitch of Gaillard (Poitiers, 1844,) was revived and highly extolled by Pagenstecher (Compte rendu du Congres Internationale d' Ophthalmologie, 2me Session, Paris, 1862), and is commonly known as Pagenstecher's stitch. It is best described by de Wecker, (Etudes Ophthalmologiques. Paris, 1862, Tome 1, p. 644) in substantially these words: "a fold of skin three or four millimetres broad, is seized with forceps close to the ciliary border, and is transfixed by a needle carrying a strong double thread of silk in such a way as to try to graze the tarsal cartilage. The two ends of the thread are tied tightly together and the stitch is left to cut its way out by suppuration. The correction of the position of the cilia is immediate, and their reduction is maintained by the cicatricial contraction which follows the elimination of the sutures by suppuration."

(*d*) Cauterizasion of the hair bulb and some of the adjacent tissues by the method of galvano-puncture (called by the writer treatment "by electrolysis.")

Any apparent novelty in this suggestion disappears when the operation is called by its old name. It is in fact an electro-chemical cautery of the tissues immediately surrounding the point of the galvano-puncture needle. A careful experimental study of this form of cautery, acting upon living as well as dead tissues, and at the anode as well as at the cathode, may be found in the Galvano-chirurgie of Bruns. (Tübingen, 1870.) The

particular procedure advocated by the writer is noticed by Himly, Jr., (Berlin, 1843,) and other authors; it is attributed to Carron du Villards.

(*e*) The writer states further that he has "recently attempted the preservation of all cilia which were moderately healthy" by passing his needle "into the integuments in front of, and parallel with the hair follicle, allowing sufficient tissue to intervene, so that the follicle and papilla will not be injured." By this procedure, repeated "as often as necessary," it is expected that the follicle together with the eyelash will be "sufficiently drawn outwardly."

The formation of an eschar, larger or smaller, in front of a single deviating eyelash or of a group or row of such eyelashes, for the purpose of drawing them into a better position through the contraction of the cicatrix, has been advocated by many writers, ancient and modern. Schauenburg (Testelin and Warlomont, in their translation of Mackenzie, Paris, 1856, page 302) advised the "making of punctures, near the roots of the eyelashes and about a line in depth, by means of a large needle, which punctures, followed by cicatrization and the formation of a contracting cicatricial tissue, have the effect of drawing the cilia in the direction of the punctures and away from the eyeball." Mackenzie (4th Ed., London, 1854, page 217,) writes: "The direction of single inverted hairs may be corrected by running the point of a lancet into the edge of the lid immediately to the outside of the root of the hair and inserting into this little wound a speck of pure potash, thus producing a small ulcer, which in cicatrizing alters the direction of the hair."

The actual cautery has been used for the same purpose from very early times, and Middledorpf long ago especially recommended the galvanic cautery as preferable to and more manageable than the hot iron.

The neatest of all methods of applying the galvanic cautery for this purpose is that already referred to as described in the American Edition of Carter, (p. 187).

(3.) In addition to the procedures already noticed, and which appear to be claimed as new contributions to surgery, the writer refers to others in a manner to call for a brief mention.

(*f*) Snaring (*illaqueatio*) of an eyelash is an operative procedure described by Celsus and revived in recent times by Snellen (Compte rendu du Congres Internationale d' Ophthalmologie,

Paris, 1862). The character of this little operation, which was noticed in the *St. Louis Medical and Surgical Journal* for November, 1871, p. 551, is entirely misconceived by the writer, and his criticism of it is wholly irrelevant.

(*g*) A method of excising the hair follicle and papilla together, whether it be a single follicle or a row or group of follicles, is wrongly attributed to Galezowski (Paris, 1875). The operation is described by Mackenzie, (1854), and is attributed by him to his colleague, Dr. Rainy. It is also mentioned in the number of the *St. Louis Medical and Surgical Journal* just quoted.

The writer's opinions regarding the pathology and rational treatment of trichiasis differ very widely from my own, but any exposition of what I believe to be a correct view of the subject must be reserved for another occasion. Meanwhile I subscribe myself very respectfully your obedient servant,

JOHN GREEN, M. D.

1420 *Washington Avenue, St. Louis, March 1st.* 1879.

BOOK REVIEWS AND NOTICES.

BOOK REVIEWS.

THE CELL DOCTRINE; ITS HISTORY AND PRESENT STATE. By JAMES TYSON, M.D., Prof., etc., etc. Second edition, revised, corrected and enlarged. Illustrated. *Philadelphia: Lindsay & Blakiston*, 1878. 12mo. pp. 202. Price $2.

Certain questions in modern science cannot be well understood without a knowledge of their history; it is necessary to know how present views were arrived at in order to understand them. This is especially true in regard to the doctrine of the elementary (histological) part, to which the old name of "cell" still attaches. Moreover, histology has been of so rapid growth that in our various medical books we find the terminology, descriptions and conclusions belonging to every conceivable stage in the development of the science; a study of the history of the subject can alone furnish the Ariadne's thread to guide one out of the labyrinth so created.

After a remarkably brief period, Dr. Tyson's useful history of the cell doctrine has been issued in a second edition. The thorough changes that some parts of the book have undergone are evidence of the activity of histologists and biologists in the eight years' interval. The new observations of these years, the views growing out of Cohnheim's researches, and the later results of investigations into the internal structure of protoplasm and nucleus are duly recorded. The delineation of the present state of the cell doctrine has been entirely rewritten and increased from 11 to 25 pages. The author's own views have suffered some change, mainly in a direction away from Beale, whom he was wont to follow pretty closely. To the previous illustrations has been added Dr. Klein's plate illustrating the structure of cells and nuclei; we call especial attention to it, because it is concealed at the end of the book, *after* the index.

The Bibliography has grown, in the meantime, by more than than one-third of its former bulk, and now occupies 44 pages. It is a valuable feature of the book, and as complete as could reasonably be expected.

The typography and paper are much better than in the first edition, and the typographical errors in the titles of foreign literature, though not absent, are less numerous. G. B.

HAND-BOOK OF THE PRACTICE OF MEDICINE. By M. CHARTERIS, M. D. Professor of Practice of Medicine, Anderson's College, Glasgow, and Physician and Lecturer in Clinical Medicine, Glasgow Royal Infirmery. With Illustrations. *Philadelphia: Linsay & Blakeston.* 1878. Price $2 00.

It may perhaps be truthfully said of this book, that; for its vast scope, and the extensive field it covers; it gives as clear a view, and as minute a description of the great multitude of diseases of which it treats, as any other book of only 325 12 mo. pages.

It seems to the writer, as a matter to be regretted, that while a man of the ability and learning which we are willing to accord to M. Charteris, was writing a book, he had not written a larger and more complete one, or else had curtailed the sphere of his labors to some *one department of practical medicine*, so that he might have had the opportunity of dealing in a more exhaustive and instructive manner, with the subjects under consideration. The table of contents presents a formidable array of the "ills that flesh is heir to" including the "legion of devils" "The diseases of the nervous system" and "The diseases of the skin."

We hope it will not be considered unkind in us to say that a book of half its size, in which was presented a minute and thorough analysis of some one of the diseases treated in this "hand-book" would be of immensely greater value to the reader, be he student or practitioner. We had hoped that publications of this kind would give way to such monograms, as above alluded to; for while we do not object to small and cheap books, on medical subjects, we do feel constrained to express the opinion that the day has passed, for small books covering so much ground as this one of Dr. Charteris'.

Again, the aim at brevity, so necessary in writing books of this class, often leads to the inculcation of error, or to say the least of it, to a failure to teach the truth; for instance, in the article on Typhus, the student might readily infer it to be taught that *emetics* had the power to abort this disease in the stage of incubation, and that Dr. Hughes Bennett, had really in "one or two attacks" rid himself by vomiting the specific *materies morbi* of Typhus.

"There are two forms of tubercle—the gray and the yellow," says the author, and if he intends to be understood that the yellow "*form*" is the product of the degeneration of the gray, he certainly should have found space to say so, even at the expense of brevity, for if he intends to teach that they constitute two distinct varieties of neoplasms, he is certainly far behind the accepted views of the profession of to-day upon this subject.

But as our objections do not lie so much as to what is taught in this book as to this class of publications, we can say to those of our readers, who may desire a work of this kind, that they probably can do no better for the money, than to purchase this hand-book of Dr. Charteris. T. B. L.

Diseases of the Bladder and Urethra in Women. By Alexander J. C. Skene, M. D., Professor of Diseases of Women in the Long Island College Hospital, etc. *New York: Wm. Wood & Co.* 1878. Illustrated. 8vo, pp. viii, 374.

This is a series of eight lectures, upon a class of diseases of the greatest importance, concerning which we find nothing systematically arranged in the English language—although from time to time much of value has appeared in periodic literature. The author, as have most general and special practitioners, has

no doubt often appreciated the great assistance that such a guide as he has now supplied, would be, in aiding the diagnosis and treatment of these troublesome and painful diseases.

The first lecture concerns the anatomy and functions of the organs, their development and malformations.

"Functional Diseases of the Bladder," the subject of the second lecture, discusses very thoroughly and instructively all vesical disorders not the result of primary lesion of the viscus. Under this head the various dislocations of the bladder are considered; among which the most common and important—cystocele—receives careful consideration, for the relief of which Dr. Skene has devised a very useful pessary which in his hands has answered satifactorily in supporting the dislocated bladder and prolapsed uterus, so commonly associated.

In treating of the Organic Diseases, the lecturer prefaces the subject, by urging the necessity of careful urinary analysis both chemical and microscopic; giving concise instructions as to the method of such investigations so far as relates to the discrimination solely of Cystic troubles. Methods of visual examination of urethra and bladder (by endoscopes of the author's own devising) are fully explained, and the very great value in many instances of such improvement in aid of diagnosis and treatment demonstrated. For dilatation of the urethra in physical exploration the author prefers slow dilatation, by means of Hunter's uterine dilator, to the rapid method taught by Simon.

Cystitis in its various degrees commands an appropriate share of the author's labor, and the methods of treatment, general and topical, are accurately described. For the relief of the torturing vesical tenesmus incident to this condition Benzoic acid is recommended as perhaps the most useful drug, often seeming to act as a specific in giving speedy and permanent relief.

The directions for the administration of medicated injections, are well worthy attention, as this mode of treatment when adopted, is frequently the cause of aggravation rather than amelioration. A very useful method of relief in some of the most inveterate of these cases, is drainage by means of self-retaining catheters, in lieu of cystotomy. The author's method has been before described both by himself and Dr. Hunter McGuire, and furnishes a mode of giving the bladder the needed rest where operative plans ought not or cannot be adopted.

This lecture concludes with a description of vesico urethral fissure a condition occasioning intense suffering, simulating urethritis and cystitis, differentiated by means of the Endoscope.

Lectures VI and VII, include neoplasms, foreign bodies in the bladder, Hypertrophy and Atrophy and diseases of the urethra, while lecture VIII is devoted to the alterations in form of the urethra, prolapsus of the mucous membrane, etc.

A sufficient number of illustrative cases is given throughout to elucidate descriptions of conditions, and wherever they can be of service, wood cuts aid the text. An appendix, illustrated, gives the history of a most instructive case of Extroversion of the Bladder, successfully operated on, and reported by Dr. Daniel Ayres, of Brooklyn.

The volume is one that should find its way to the hands of every practitioner of medicine in the West and cannot fail to be of service, as it undoubtedly will supply a want that has been often felt.

The mechanical execution is fair, the paper and printing, with the exception of a few typographical errors, all that could be desired. G. A. M.

LECTURES ON BRIGHT'S DISEASE OF THE KIDNEYS. By J. M. CHARCOT, Professor in the Faculty of Medicine of Paris, etc., etc. Collected and published by Drs. Bourneville and Levestre, editors of the *Progres Medical*, and translated, with the permission of the author, by HENRY B. MILLARD, A.M., M.D. *New York: Wm. Wood & Co.*, 1878. Wood-cuts and two colored plates. 8vo, pp. X-100.

These lectures were delivered in 1874, but the foot-notes utilize all the information of any value up to the present year.

Twenty-five, of the one hundred pages of this book, are devoted to a description of the minute anatomy and the physiology of the kidney, a knowledge of which is, in the opinion of the distinguished author, indispensable to one who would comprehend the histological changes and clinical phenomena observed in the diseases of these organs. A comprehension of the anatomical descriptions, phenominally graphic, is aided by the addition of wood cuts, after Henle, Schweigger-Seidel, Heidenhain, Ludwig and Rindfleisch.

Of the urinary secretion, he thinks it is "a phenomenon of filtration, or rather, of diffusion; it is a special diffusion in which the product, by reason of particular properties of the membrane, is profoundly modified." The "specific" products of the

urine—uric acid and urea—pre-exist in the blood. In endeavoring to determine in what part of the urinary apparatus the "selection" of these specific products occurs, he is of the opinion that the researches of Heidenhain with the sulphate of indigo-sodique add strength to the older view of Bowman, and that those parts of the uriniferous tubules lined with the cloudy, rod-like epithelium—*tubuli contorti* and ascending branch of Henle's lop—are specially endowed with this selective power. These considerations, in some sense abstract, it may be stated for the benefit of the "practical" man, are duly utilized in the diagnosis of renal diseases, and "in the interpretation of phenomena belonging to the domain of pathological anatomy."

Lecture III is devoted to tubular infarctions of the kidney, urinary casts, and a summary of the views of Bright's disease. Uratic, calcareous, biliary and sanguine infarctions of the uriniferous tubules are succinctly described and their clinical and pathological significance distinctly indicated. The opinion is expressed that this group of renal alterations is not generally accorded as much importance as they seem to merit both from a theoretical and practical point of view; while, on the contrary, too great a clinical significance has been given to the urinary casts. The view that information may be derived from the latter that will infallibly indicate the anatomical condition of the tubes, from the depths of which they come, is characterized as an ingenious one, but one whose practical application has been singularly exaggerated. If the "practical" man wearied at the excursion taken, in the beginning, into the field of histology and physiology, he must have found some reward for his endurance when he came to the explanation of the reasons why casts from the *tubuli contorti* could only in very rare instances, if at all, find their way into the urine. We quote: "In a general way, the clinical importance of urinary casts has been greatly exaggerated. They are *not*, as they have been called, 'faithful messengers announcing to the clinical observer the anatomical condition of the kidney;' 'mirrors reflecting the various renal lesions.' Formed in the ultimate parts of the apparatus of the tubuli urinifiri, they can only, in any case, furnish information upon the condition of these parts. I have previously maintained the fact that the casts found in the convoluted tubes can but very seldom pass into the urine."

The various forms of casts are, nevertheless, studied and figured, both *in situ* and as they appear in the urine, and their

real value clearly indicated. To the hyaline casts very little importance is attached, since they are found in normal conditions and in various conditions other than those of renal disease; even, in fact, where there is no albuminuria. When renal disease exists the hyaline casts are only of interest from their long persistence. The granular casts are of the most importance, their presence for a certain length of time in moderately albumenious urines aiding to establish the diagnosis of the *form*, and, in doubtful cases, the positive diagnosis of the *disease*.

It will afford pleasure to all believers in what may be called the "English doctrine" of the multiplicity of the forms of Bright's disease to know that this candid observer and able teacher has long been a convert to this theory. This doctrine now numbers among its supporters a majority of the ablest writers and workers in this field of pathology; such men as Lecorché, Lancereaux, Cornil, Ranvier, Bartels, Labadie-Lagrave, etc., having recently annuonced their belief in it With his customary directness our author sounds no uncertain note. He says (p. 40): "In my opinion . . . the various forms of renal alterations in question do not represent the successive phases of one and the same morbid process; some of these alterations, at least, constitute anatomo-pathological states fundamentally distinct, to which correspond, during life, as many well-marked symptomatic groups, which enable us to mount upward from the symptom to the lesion, and to form a special diagnosis and prognosis."

Of his *exposé* of these several "morbid processes" and their accompanying "symptomatic groups," it is useless to say more than that it is in the author's best vein: graphic, succinct, brilliant; presenting a picture that all will read with pleasure and most of us with profit. The forms of renal disorder included in the term Bright's disease, are the large white kidney, the granular contracted kidney and the amyloid kindney, and are all either subacute or primarily chronic diseases. The study of the histological alterations observed in the granular contracted kidney and the large white kidney is facilitated by the additions of wood-cuts, after Cornil and Ranvier, Dickinson and Kelsch.

Of *scarlatinous nephritis*, confounded by many authors with *parenchymatous nephritis*, he says: "In studying this subject, not simply in connection with the *dicta* of systematic works, but going back to original documents, we are quickly impressed by this fact, that the opinion which makes scarlatinal nephritis the

point of departure of permanent lesions attributable to the *large white* kidney is founded on no decisive observation. Doubtless there exist cases in which occur an acute febrile commencement, dropsies, and a continuance of two or three months, and in which an alteration is found upon autopsy, resembling that which characterizes the *white* kidney of parenchymatous nephritis. It is true that the diseased kidney may be augmented in volume with a smooth surface, and its cortical substance, thickened, may present a yellowish tinge, or white mingled with red striæ. But, we have already observed that in the first phases of interstitial nephritis the kidney offers a close analogy to the white kidney of parenchymatous nephritis, and in reality the few observations of *scarlatinous* nephritis in which a regular histological examination has been made concur in showing the renal alteration observed in such cases to be a form of acute or subacute variety of interstitial nephritis." In support of this view, which in our opinion cannot be disputed unless by original research in the field of actual observation, one case is cited by Biemer, one by Wagner, two by Kelsch, and another by J. Coats. In all five of these cases the essential pathological lesion was an infiltration of the thickness of the connective stroma of the cortical substance with small cells; in no case was there conjunctive proliferation of epithelial cells. In some of these cases, *i. e.*, in the two by Kelsch, the epithelial cells of the convoluted tubes were granular, but little swollen, and in the others they were not notably altered, at least not to the extent of infiltration with fatty granules.

The views of the author are charactized by that broadness we would naturally expect in one of his vast clinical experience. The book before us does not treat of diseases of the kidney as if the kidney was the only organ to be considered in the matter; but in due subordination to the relations, not only anatomical and physiological but pathological as well, these important structures have to the body, of which they are, after all, only a part.

The matter of treatment is not considered, a fact which the author appears to realize will be a detriment in the eyes of his American readers, for we have somewhat of an apology for the omission in the preface he has written at the request of Dr. Millard, the translator.

The book, which is in the highest style of the publisher's art,

has excellent plates of the large smooth white kidney, a longitudinal section of the same, and one of the granular contracted kidney. It will, we think, be extensively read by M. Charcot's American brethren, and this is certainly what it deserves at the hands of a body of men with whom he appears to be thoroughly *en rapport*. In his excellent translation Dr. Millard has performed a thankworthy task. J. B.

PRACTICAL SURGERY; Including Surgical Dressings, Bandaging, Ligations and Amputations. By J. EWING MEARS, M.D., Demonstrator of Surgery in Jefferson Medical College, etc., etc. With 227 illustrations. *Philadelphia: Lindsay & Blakiston.* 1878. 12mo., pp. 279. Price $2.

We could sincerely wish that books of this and of a similar class on Minor Surgery (Sargeant, 1848; Heath, 1861; Packard, 1863; Annandale, 1866), Hand-books and Manuals of Surgical Operations (Stephen Smith, 1862; Joseph Bell, 1866), Essentials of Bandaging (Berkley Hill, 1°67), Practical Surgery (Wales, 1867; Mears, 1878), and many others, could all be classified, given a definite place, and made to treat of the same subjects. Some include fractures and dislocations, others omit these subjects, but treat of ligations and amputations; some give a few only of the smaller operations, and others again describe briefly nearly all. Thus the student to have complete instruction from this source would be obliged to purchase several volumes, whereas one alone should include all that ought to be treated of by books of this class.

These manuals are convenient and useful for the student, as they treat *in extenso* of that which he should early learn, and which are not dwelt upon in the larger surgical works. Though just why a large volume, purporting to be a complete treatise on surgery, should not include all that could be imparted, especially of a practical character, we cannot devine. We trust that Agnew and others, now issuing works on surgery, may have them complete, and thus do away with the necessity of these limitless "hand-books." It were just as proper to at once and early place in the hands of the student a large and complete treatise on surgery, as it is now considered, and very justly, proper to give a student a large and complete work on anatomy like Gray's.

Dr. Mears, however, in the work before us has, to a great extent, disarmed such criticism, for he says, in the preface, that it has been written in response to the request of students who have been under his instruction, and who have desired a book

which would embrace, in a condensed form, the subjects treated of. Thus it does not purport to be a complete work on operative, minor or practical surgery, but to treat briefly of Surgical Dressings (Part I.), Bandaging (Part II.), Ligations (Part III.), Amputations (Part IV.) The descriptions are terse and clear; much superfluous matter has been omitted, and many of the later things included, such as Lister's Antiseptic, Sayre's plaster jacket, rendering cotton hygroscopic and antiseptic, etc., etc. The illustrations and directions for ligating vessels and amputating limbs are quite full and clear. So that on the dead or living subject the student would have no difficulty in following the author.

The mechanical execution of the work is good, and we predict for it a large sale. A. J. S.

A Practical Manual of the Diseases of Children: With a Formulary. By Edward Ellis, M.D., late Physician to the Victoria Hospital for Sick Children, etc. Third edition. *New York: Wm. Wood & Co.* 1879. 8vo., pp. xii.—213.

This is one of the volumes belonging to the Library of Standard Medical Authors, which with praiseworthy enterprise Wm. Wood & Co. have undertaken to issue.

The preface announces that the author hopes that the volume may prove "of value to students and practitioners as a *handy book of reference*," and as such the subjects are treated in such concise manner, evincing so much practical knowledge, that the reader feels like asking, with Smike, for "more." In fact we think that manuals should almost never be put in the hands of students, and except for a chance suggestion, oftentimes perhaps of value, the practitioner is better without them; they are prone to encourage lazy literary habits and a fondness for superficial knowledge. The authors of such condensed information we venture to say studied far more liberally.

For instance, seven lines describe the various indications presented by the tongue, excepting in some "special conditions."

Eleven pages despatches thirty-nine forms of skin disease, including erysipelas and parasitici.

Otorrhea and cephalæmatoma are crowded into the section on diseases of the nervous system.

Epilepsy requires scarcely a page, and the treatment is condensed into half a dozen lines, including the remedies advised by Trousseau, West and Brown-Séquard, without any of the

extremely important methods for the administration of the medicines insisted upon by each of these authorities.

In the rather lengthy and really excellent account of diphtheria, the author quotes from a "Dr. Orton, of America," a recommendation to use the bichromate of potash in doses of 1-16 to 1-8 grains, dissolved in water, to be administered every half hour until vomiting ensues, when it is to be continued every two hours for an undefined time. "Dr. Orton states that this treatment was successful, with a *single* exception, in 142 cases." This chemical is a corrosive poison, the dose for an adult, as stated in the U. S. D., 1-5 gr. *daily*, which may be gradually increased; 3-4 grain is an emetic in consequence of its irritating properties. The writer of this recalls a very sad case of death caused by the accidental swallowing by a young lady of a portion of a gargle containing bichromate potash ordered by her attendant, a homeopath; death was most painful and occurred in a very few hours. We can but be surprised that such an accomplished physician as the author of this manual should place credence in such an assertion as he quotes, and thereby to a certain extent approves.

The sections upon treatment are, however, generally excellent where the author draws from his own rich experience, the only possible objection being that already adverted upon, too great terseness, so that at times important details are omitted, as, for instance, the paragraphs relating to position in cyanosis and atelectasis pulmonum neonatorum. The elder Meigs, the originator of the method, as well as his eminent son, dwell particularly upon the importance of maintaining persistently, for days even, the right lateral semi-supine position. The value of this the reviewer has frequently had occasion to demonstrate.

The value of tracheotomy and the time as well as method of performing this important operation receives merited notice and approval.

The volume, besides some culinary recipes, contains some forty pages of formulas and lists of drugs. We cannot help thinking this a waste of space which might have been more profitably utilized.

Notwithstanding we feel compelled to criticize unfavorably many points in the Manual, they are perhaps faults difficult of avoidance in so condensed a volume. The author has evidently brought to his work a vast amount of experience, observation

and labor, and the book will no doubt be of benefit to the subscribers to the Standard Library, of which we sincerely hope there will be a large list. The typographical work is excellent in every respect. G. A. M.

BOOKS AND PAMPHLETS RECEIVED.

NAVAL HYGIENE: Human Health and the Means of Preventing Disease, with Illustrative Incidents, principally derived from Naval Experience. By JOSEPH WILSON, M. D., Medical Director U. S. Navy. Second edition, with colored lithographs, etc. *Philadelphia: Lindsay & Blakiston*, 1879. 8vo., pp. 274. Price $3.00 (through Gray & Baker).

REPORT OF INVESTIGATIONS into the Pathogeny of Diptheria, conducted by Edward Curtis, M. D., and Thomas E. Satterwait, M. D., made in accordance with an order of the New York Board of Health.

AN ADDRESS presenting the claims of the Medical Department, read before a Council in the interests of the Syracuse University, by Alfred Mercer, M. D. Syracuse, N. Y., 1879.

EVOLUTION AND HUMAN ANATOMY. By S. E. Chaillé, A, M., M. D., Prof. etc. Rreprint from the *Med. Rec.*, Feb. 22, 1879. New York, 1879.

CHRONIC CATARRH of the Bladder and of some Forms of Acute Cystitis, by Theodore Deeke (Reprint from the *Buffalo Med. and Surg. Jl.*, Feb., 1879).

TRANSACTIONS OF THE TWENTY-FIFTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF NORTH CAROLINA, held at Goldsborough, May 17th, 1878. pp. 98.

FIRST ANNUAL REPORT of the Presbyterean Eye and Ear Charity Hospital, No. 77 E. Baltimore street, Baltimore, Md., 1879.

TRANSACTIONS of the Medical Society of the State of Tennessee, at its Forty-fifth Annual Meeting, 1878. Paper, 8vo., pp. 102.

TENTH ANNUAL REPORT of the Brooklyn Eye and Ear Hospital, 208 Washington street, for the year 1878. Brooklyn, N. Y., 1879.

ANNUAL REPORT of the Directors and Medical Board of St. Michael's Hospital, Newark, N. J., Jan., 1879.

AMPUTATION OF THE CERVIX UTERI. By W. H. WATHEN, M. D. *Reprint from Richmond and Louisville Medical Journal.* 1878.

CLINICAL GYNECOLOGY. By W. H. WATHEN, M. D. *Reprint from Richmond and Louisville Medical Journal* 1878.

URETHRAL CARUNCLES. By W. H. WATHEN, M. D. *Reprint from Obstetrical Gazette.* 1879.

SELECTIONS.

PROF. CHARCOT AND HIS EXPERIMENTS AT LA SALPETRIERE.

I brought with me from America a letter of introduction to Prof. Charcot, and visiting the Salpêtrière soon after my arrival in Paris, in August, 1877, was fortunate in presenting it. At the same time an English physician of considerable eminence had called on the renowned neurologist, and we thus had the opportunity of seeing several of his demonstrations in private.

Although his experiments and their apparent results seemed to me something remarkable and inexplicable, I did not at the time, attribute much importance to them from a practical point of view, especially as Prof. Charcot himself, was undecided as to whether or not his new theories would develop to the point of utility in the treatment of these cases.

When I returned to Paris in the Autumn of 1878, and began attending Prof. Charcot's regular lectures at La Salpêtrière, I found him more enthusiastic than ever regarding his new facts, which he went on to demonstrate in several discourses.

Such interest has the subject of his lectures elicited, that I saw among his attentive listeners, such men as Virchow and Martin, of Berlin, and many other renowned men of our profession. Not only on the Continent, but in Great Britain, his teachings are attracting so much interest, that I am induced to

give the following summary of them, to the exclusion of matters which, I, myself, consider of more practical interest. Though it is Prof. Charcot upon whom, as a public teacher, the interest in this subject is at present directed, it was a Dr. Burge who claims to have made the first discoveries in this direction. The latter first published his views, I believe, in 1876.

On my first visit to La Salpêtrière I was shown two female patients, one about eighteen and the other twenty-three years of age, who were both the victims of frequent attacks of what Prof. Charcot denominates "Hystero-Epilepsy." One of these patients, the younger, had had these convulsions for the last two years very frequently, sometimes even to the number of fifty and one hundred in the twenty-four hours. In spite of all this her intellect was not in the least affected; and that fact, in connection with this, that no period of cerebral congestion followed the fits, as in true epilepsy, are valuable aids in making a differential diagnosis between the two diseases.

These girls were both completely hemi-anæsthetic. On the side that was insensible a large darning-needle could be passed through the skin without the least sensation being perceived by the patient.

METALLO-THERAPEUTICS.

But the most wonderful of the phenomena in these cases, was that by the application of certain metals or a large horse-shoe magnet to the side that was deprived of sensation, this abnormal condition would change from the side to which the metal was applied, to the one that had been before entirely normal. In one of these patients, who was anæsthetic on her *left* side, Prof. Charcot applied a twenty-franc gold piece to the outer aspect of the left arm, and after the expiration of three minutes it was found that a small circle around the gold coin had regained its sensibility, while at the same time a corresponding surface on the *right* arm had lost all sensation.

At the end of ten minutes the patient was completely anæsthetic on her right side, and had regained her sensibility on her *left*.

Prof. Charcot said that some persons were susceptible to one metal and some to another, and brought forward the second patient, in whom he produced exactly the same phenomena as in the first, by using a copper plate instead of a gold coin. He also stated that in all these cases there existed an ovarian tenderness on the side that was anæsthetic.

But the practical part of this matter as claimed by both Dr. Burge and Prof. Charcot is, that the metal to which the patient is susceptible, or in other words, that which will change the anæsthetic condition from one side to the other, is the remedy that is indicated in the treatment of each particular case.

To the patient who was sensible to gold, he was giving daily .02 gramms of the chloride of gold and sodium.

To the patient who was sensible to copper, he was giving .3 gramms of the hydrated binoxide of copper three times in a day. Though last year Prof. Charcot said he had not used these remedies sufficiently long to test their efficacy; this year in his public lectures he declares that the medicines have been in each case highly beneficial in lessening the frequency of the attacks, and improving the general condition of the patients. Still, he did not admit that in any instance he had been able to affect a complete cure.

Although the principles involved were the same as in the experiments I had seen Prof. Charcot perform in private, in his public lectures he greatly extended them, and brought forward a number of new cases to illustrate his subject.

In one case the entire throat was so entirely anæsthetic that the doctor could irritate the epiglottis with his finger without producing the slightest reflex phenomenon.

A copper plate, 3 by 5 centimeters, was tied over the front of this patient's throat for seven minutes, at the end of which time she was so sensitive that any attempt at passing the finger into the pharynx brought on violent attempts at vomiting. The hystero-epileptic patients who were hemi-anæsthetic had many of them another remarkable symptom, and that was complete color-blindness on the side that was insensible.

In the case of a girl eighteen years of age who was anæsthetic on her right side, the left eye was closed, and red, blue, green and orange-colored cards that were passed before the right eye, were all pronounced by the patient as *white*.

The copper plate that had been bound on the throat of the previous patient, was bound on to the right temple of this one, and in five minutes she could accurately discern colors with her right eye, but was as completely color-blind in her left, as she had previously been in her right. The migration of sensibility and sense that these persons experienced upon the application of the metals was, in every instance, only temporary in char-

acter, as, after the expiration of a variable period of time, say from ten to thirty minutes, the old condition of hemi-anæsthesia was found to exist on the side at first affected.

A woman, 47 years of age, who had passed the menopause was presented, who had been the victim of hystero-epileptic attacks from her early womanhood, a case demonstrating the fact that this disease will not always cease with the cessation of the menses.

This patient had for years a permanent contraction of the flexors of the fingers and hand of the right side. A large horse-shoe magnet was placed near the outer aspect of the right arm, and in about five minutes the rigid contraction in the muscles of this side began to give way, and in ten minutes she was able to use freely and without restraint the right hand, but the condition of the contraction had been transferred to the flexors of the left hand.

The transposal of this abnormal condition only lasted for a few moments after the magnet was removed, for in fifteen minutes her right hand presented the same appearance as when she entered the room.

During his second lecture Prof. Charcot brought on the platform two patients whom I recognized at once as those upon whom I had seen him experiment in 1877. They were seated in chairs near each other, and an immense tuning fork between them. This instrument was then struck, and when it began to sound, both girls with perfect accord fell into a cataleptic condition. Their eyes widely opened seemed to gaze with a vacant stare at some far-off object. Their hands, arms, and other parts of their bodies could be placed in any given attitude and would thus remain for an indefinite period of time. They could be aroused from this condition by suddenly blowing into their faces, or pressing upon the ovary that was sensitive.

The sudden flame of a light from an electric lamp thrown into the eyes of these patients, or even the fixed gaze of Prof. Charcot's eye, would produce the same phenomena. From this cataleptic condition, if not disburbed, the patient would pass into that of a somnambulic state. Prof. Charcot said: "This is the condition into which animal magnetizers plunge hysterical persons, and, during its persistence, they cause them to perform mystical acts such as walking in the dark, describing absent persons, distant places, and the like. From this condition I

arouse this patient by pressing suddenly upon one of her ovaries. She may not be entirely herself for a quarter of an hour, but will soon regain her normal condition."

In his third lecture Prof. Charcot brought into the lecture-room a girl about 20 years of age lying upon a cot, dressed in a long garment, the sleeves and legs of which extended far beyond the hands and feet, and to which were attached long pieces of cord to control her during her convulsive paroxysms. The patient had an apparatus around her body (a new invention of Dr. Poirier), constructed something like a tourniquet for compressing the abdominal aorta, but in which the pad was made to press upon the right ovary. This truss was removed from this patient, and she at once went into a series of violent convulsions. During the time of these attacks Prof. Charcot gave a minute description of each phase of her symptoms.

As to the diagnosis he said: "Of the affection, as distinguished from true epilepsy, we have first to observe that the fits always occur during the waking hours of the patient.

"Again, they never fall down in the street in convulsions, for they have always premonotory symptoms that last a sufficient length of time to allow them to seek a place of safety before the attacks occur.

"Each paroxysm consists of a certain regular and definite series of evolutions.

"First, you see this patient extends her arms over her head, then gradually draws them down over her abdomen, and, after keeping them in a tonic spastic condition of contraction for a few seconds, she begins a series of active clonic spasms.

"This stage in which the patient is at present, is the epileptiform period of the attack.

"There is no physician of experience who, stepping into this room at this moment and viewing this patient for the first time, but would diagnosticate her case as one of *true* epilepsy.

"Our patient, after these clonic spasms are over, will remain quiet for a few seconds, and then the attack will resume its hysterical type again, *phase des grands mouvements*, in which you see she executes a series of rapid to and fro movements with her entire body. When these *grands mouvements* are over, the next stage of the attacks begin, which is *la phase des attitudes passionelles*, in which raising herself to a sitting posture, she alternately strikes an attitude and wears an expression of fear and hatred, and then of joy and extreme bliss.

"At one time she will see horrid objects that approach her, and in the next moment her visions are of the most fascinating kind, and she hears the strains of sweetest music.

"After these last phenomena have occurred, our patient will remain quiet for an indefinite period of time, and will then execute again the same series of movements and attitudes as before"

"After M. Charcot had allowed her to undergo these convulsions sufficiently long to illustrate to his hearers all their different stages and symptoms, he pressed firmly with his closed fist on her right ovary, the patient heaved a long sigh of relief and the convulsions ceased at once.

The instrument for the production of continuous pressure was replaced, and in five minutes she was again in a normal condition.

The hystero-epileptic attacks with these patients usually occur without immediate exciting cause, although fear and anger have a tendency to develop them.

There is, in most of them, an *epileptogenic zone*, which may be situated in any part of the body, and which, being pressed upon, or in any way irritated, will throw the patient at once into a violent series of convulsions.

Prof. Charcot, just before the close of one of his lectures, showed a person in whom he said this sensitive zone was at the last cervical vertebra.

As the girl stood in the hall through which the students passed as they went from the lecture-room, one of them took occasion to verify Prof. Charcot's assertion by suddenly pressing his finger on this point of her spine. The poor creature fell down as suddenly as if shot, on the stone floor, and went into convulsions of as violent a character as I ever saw.

Dr. Oulmont, Prof. Charcot's interne, soon made his appearance, and coming down with the whole weight of his body upon the right ovary of the patient with his closed hand, he was soon able to arrest the paroxysm.

Prof. Charcot closed this lecture by showing us, by means of a magic lantern, copies of paintings by the old masters, representing persons as being possessed of the devil, and priests casting them out, in whom the attitudes and expressions of the persons represented were an exact counterpart of some phase or stage in the hysterical attacks of the patients he had shown us.

WHAT IS THOUGHT OF PROF. CHARCOT AND HIS TEACHINGS.

A vast majority of those who listen to Prof. Charcot at La Salpêtrière have such an implicit faith in the integrity and wisdom of the man, that they believe that he could not be deceived by the patients upon whom he operates, and would present nothing to his hearers in which he *himself* had not the most unbounded faith.

The great Claude Bernard evidently believed these phenomena to be genuine, for, after witnessing them just before his death, he was perfectly astounded at their manifestations, and exclaimed, "*these facts show us how little we know.*"

Although this represents the sentiments of that portion of the profession who are thrown in immediate contact with Prof. Charcot, it is far from being generally adopted outside of Paris and France.

Here, in Berlin, the first evening that I went to hear Prof. Westphal, he brought out for the subject of his lecture an hystero-epileptic patient.

This patient was fifty-three years of age, and was what Prof. Westphal designated as a true type of hystero-epilepsy which has been of twenty-five years duration. She was nearly idiotic, thus showing that the disease *does* effect the intellect.

He claimed that the nice points in the diagnosis of this disease, as given by Prof. Charcot, could not always be recognized in practice.

A case like this might be one of *genuine* epilepsy affecting a person of hysterical temperament, in which one could not always decide, as to where, in any given attack, the hysterical element ends, and the epileptic begins.

He went on to refute the generalized statement that one could arrest the paroxysims by pressure upon the ovaries, or that ovarian tenderness was a prominent symptom attending them.

He said that he and Prof. Schröder had experimented upon a number of cases by making *direct* pressure upon the ovaries, by combined manipulation through the vaginal and abdominal walls, and had found that the ovaries were not generally in the least sensitive. Besides he was of the opinion that Prof. Charcot, with his mode of manipulating, *did not in one case out of five touch the ovary.*

Furthermore in the single case of a male patient, whom he had

had under observation and who had all the symptoms of genuine hystero-epilepsy, he was able to arrest the paroxysms as effectually by firm pressure into one of the iliac fossæ as Dr. Charcot had been able to do in his cases, where he had *supposed* he was pressing upon a sensitive ovary.

He believes that the arrest of the convulsive attacks in these cases is due to a general reflex action produced by pressure upon the pelvic nerves.

After this lecture, I had a private interview with Prof. Westphal, and he, knowing that I had just come from Paris, began at once to question me as to what I had seen of Prof. Charcot's doing at La Salpêtrière. Finding him skeptical as to the genuineness of the entire phenomena of metallo-therapeutics I asked him his explanation of Prof. Charcot's experiments.

He told me then promptly that, much as he had formerly admired the great French physiologist, in this matter, Prof. Charcot was playing the part of a montebank and juggler. I then asked him what object a man of his standing could have for taking such a course. "Money! money!" was his reply. At this juncture we were interrupted or I should have interrogated Prof. Westphal farther; for, to me, it is inconceivable that a man of Prof. Charcot's standing should take the course in this matter that he does, unless he firmly believes in what he teaches; besides I cannot see how he can make money from his demonstrations and lectures, as all of them are free.

As bearing upon this subject and giving, in my veiw, the best explanation, I will close the article with the following history of a case as published by Dr. Hughes Bennett, in a late number of the *British Medical Journal:*

In August, 1877, a woman 44 years of age, was admitted to Dr. Bennett's wards, having for four years been the subject of a variety of nervous attacks, without real convulsions. She was in tolerable health but was entirely anæsthetic on her right side. Needles passed through the skin of the side, and the most powerful Faradic currents produced no sensation. The left side was nearly natural.

From Aug., 1877, to April, 1878, the patient was treated by tonics and electricity, but without any effect; in fact the paresis and anæsthesia had become more marked. The attention of Dr. Bennett having been called to the subject of metallo-therapy by some published accounts of Prof. Charcot's demonstrations, he (Dr. B.,) resolved to put his patient upon this treatment.

Accordingly the patient was blidfolded, so that she could not see what was doing, the discs composed of various metals as gold, silver, copper, lead, zinc and tin were applied to the anæsthetic side without producing the least effect.

After Dr. Bennett had tried these experiments repeatedly, and was convinced that no result would follow, he invited several medical friends to witness them. At this time he appled a zinc plate to the arm, and after it had been on for twenty minutes the patient said she felt a tickling sensation in the part, and, to the Doctor's surprise, he found that slight pricks of a pin could be felt. A few moments later, sensibility had returned to the side so long insensible. Twenty-four hours after this experiment, the right side was found in its original anæsthetic condition.

It was now found that *all* the metals that had before failed to produce an effect upon this patient, would each, when applied, produce a temporary return of sensibility to the parts. At this juncture Dr. Bennett applied two discs of wood upon the arm, and found that after they had been on for a few moments, sensibility had returned to the side exactly as when *metals* had been used.

The result of all this was, no marked benefit to the patient, and some months later she was sent to the seaside. Dr. Bennett deduces from this, that the reason why he produced no effect upon his patient in his first experiments was that she was entirely ignorant of what results were attempted to be attained.

When he had summoned his friends in order to demonstrate to them that Prof. Charcot's results were not obtainable, lo, the very phenomenon that he was positive would *not* occur, did actually happen; and why? Simply because it was necessary for him to make some explanation of the subject in the presence of his patient. As soon as she knew what *effect* was intended to be produced, that effect followed.

Dr. Bennett closes his review of this subject in these words: "There are always those who, either from an involuntary bias of mind, or from a natural credulity in what appears marvelous, seem to think that what is diffcult of explanation must of necessity be true. Thus does the spiritualist and the electro-biologist pledge his faith to what his reason cannot comprehend, and what he perhaps honestly believes to be genuine.

"As well might one credit the reality of the tricks of a con-

juror, because it baffles all our efforts to appreciate the steps by which he deceives us.

"In all these hypotheses, the more we eliminate sources of error, the more that unprejudiced observers investigate the subject, and the more that stringent tests are applied, the more easy and simply do we find these 'inexplicable phenomena' become.

"It may be that metallo-therapy, the most recent of the doctrines which have flattered the psychological world is doomed to an early grave, to be resurrected in the future in some other novel and more attractive form."—*W. S. Caldwell in The Chicago Medical Examiner and Journal, Feb.* 1879.

MORTALITY TABLE.

CITIES.	ESTIMATED POPULATION.	DEATHS DURING THE PAST MONTH.	DEATH RATE PER 1000 LIVING	
			FOR PAST MONTH	FOR PAST YEAR
New York	1,093,171	3,057	29.17	23.42
Philadelphia	876,118	1,778	21.3	21.54
Brooklyn	549,438	1,263	21.72	25.50
St. Louis	500.000	590	12.26	12.00
Chicago	460,000	533	11.60	17.83
Boston	375,476	758	22.31	20.10
Cincinnati	280,000	541	20.15	15.81
New Orleans	210,000	540	26.35	

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.		METRIC. Gms.
ℿi.	or gr. i. equals - - - -	06
ℿxv.	or gr. xv. equals - - - -	1
f℥i.	or ℥i. equals - - - - -	4
f℥i.	or ℥i. equals - - - - -	32

The decimal line instead of points makes errors impossible. A teaspoon is 5 Gms.; a tablespoon, 20 Gms.—*Metric Bureau.*

ANNOUNCEMENTS FOR THE MONTH.

HOSPITALS.

CITY HOSPITAL, corner Linn street and Lafayette avenue—D. V. Dean, M. D., Superintendent in charge. *Clinical Lectures.*—MONDAYS, A. M., 9 to 10, Prof. Robinson, medical; 10 to 11, Prof. Lankford, surgical; 11 to 12, Prof. Michel, eye. WEDNESDAYS, P. M., 3 to 5, Prof. Smith, medical; 4 to 5, Prof. Hodgen, surgical, and Dr. J. Green, eye. THURSDAYS, A. M., 9 to 10, Prof. Bauduy, nervous system; 10 to 11, Prof. Lankford; 11 to 12, Prof. Michel. SATURDAYS, same as Wednesdays.

ST. LOUIS MULLANPHY HOSPITAL, corner Grand avenue and Montgomery street—In charge of the Sisters of Charity. *Clinical Lectures.*—TUESDAYS, A. M., 9 to 10. Dr. Pollak, eye, and Dr. G. A. Moses, diseases of children; 10 to 11, Prof. Gregory, (and Dr. Carson,) surgical; 11 to 12, Prof. Boisliniere, (and Dr. Moses,) diseases of females; 12 to 1. Dr. Glasgow, diseases of throat and chest, (and Dr. McCabe, medical). SATURDAYS, same as Tuesdays.

ST. JOHN'S HOSPITAL, corner Twenty-third and Morgan Sts.—Conducted by Sisters of Mercy. *Clinical Lectures.*—MONDAYS, A.M., 10 to 11, Dr. (Prof. Adj't.) Shaw, medical; 11 to 12, Prof. Prewitt, surgical; P. M., 2 to 3, Prof. Todd, diseases of the ear and throat, and Prof. Kingsley, diseases of children; 3 to 4, Prof. Papin, diseases of women. TUESDAYS, A. M., 10 to 11, Dr. Shaw, medical; 11 to 12, Prof. Prewitt, surgical, and Prof. Michel, diseases of the eye; P. M., 2 to 3, Prof. Kingsley; 3 to 4, Prof. Papin. WEDNESDAYS, A. M. 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Todd. THURSDAYS, A. M., 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Kingsley; 3 to 4, Prof. Papin. FRIDAY, A. M., 10 to 11, Dr. Shaw; 11 to 12, Profs. Prewitt and Michel; P. M., 2 to 3, Prof. Todd; 3 to 4, Prof. Papin. SATURDAYS, A. M., 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Kingsley.

ST. LUKE'S HOSPITAL, Tenth and St. Charles streets—*Episcopalian.—Clinics—Dispensary.*—MONDAYS, P. M., 2 to 3, Dr. J. Green, diseases of the eye and ear, and Dr. Wm. Porter, diseases of the throat and lungs; 3 to 4, Dr. Barret, diseases of women. TUESDAYS, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel, diseases of children. WEDNESDAY, P. M., 2 to 3, Dr. Green. THURSDAY, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel. FRIDAYS, P. M., 1 to 3, Drs. Green and Porter; 3 to 4, Dr. Barret. SATURDAYS, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel.

ALEXIAN BROTHERS' HOSPITAL, Corner Jefferson Avenue and Osage Street.—*Clinics.*—Daily, at 10 A. M., Dr. Wesseler, medical, and Dr. Lutz, surgical.

INFIRMARIES.

ST. MARY'S INFIRMARY, 1536 Papin street, under the charge of Sisters of St. Mary.—*Clinics.*—Daily, A. M., 9 to 10., Dr. Yarnall, diseases of women and children; 10 to 11, Dr. Holland, general and orthopedic surgery; 11 to 12, Dr. Hypes, medical. MONDAYS, WEDNESDAYS and FRIDAYS, 12 to 1, Drs. Gebser and Frazier, diseases of the eye and ear; 4 to 5, Dr. Stuever, diseases of the throat; TUESDAYS, THURSDAYS and SATURDAYS, P. M., 1 to 2, Dr. Hardaway, diseases of the skin.

MISSOURI EYE AND EAR INFIRMARY, 109 N. Eighth street—*Clinics.*—Daily, P. M., 1½ to 3, Drs. Gebser and Frazier, diseases of the eye and ear.

SOCIETIES.

ST. LOUIS MEDICAL SOCIETY, Polytechnic Building, corner Seventh and Chestnut streets, meets Saturdays, from 8 to 10 p. m. Papers are read, morbid specimens exhibited, cases related, and discussions had.

MEDICO-CHIRURGICAL SOCIETY, 1615 Washinton Avenue, meets on the second and fourth Monday of each month, from 8 to 10 p. m. Morbid specimens, cases and discussions.

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ORIGINAL COMMUNICATIONS.

SOME FORMS OF IRITIS AND THEIR CONSEQUENCES.

BY R. GEBSER, M.D., ST. LOUIS, *Surgeon to the Missouri Eye and Ear Infirmary, and to the Department for Diseases of the Eye and Ear in St. Mary's Infirmary.*

HAVING recently observed, both in clinical and private practice, a considerable number of cases of iritis neglected or not diagnosed in time to check the disastrous consequences that inevitably ensue, I have been induced to make a few remarks on this all-important subject, with the view of directing the attention of the general practitioners to this serious eye disease, which, neglected or not properly treated, leads, in the great majority of cases, to the total or partial destruction of that valuable organ, and to great and prolonged suffering of the patient.

I may be pardoned if, in going briefly over this chapter, I shall describe conditions which are more or less known, but which I could not well pass over without mentioning.

Iritis has been classified either according to its different causes or according to its different conditions or state, representing typical pictures of the disease. One or the other classification may be adopted with equal advantage. I shall choose the latter, and commence with

IRITIS PLASTICA,

often called *iritis idiopathica*. Photophobia, lachrymation, injection of the conjunctiva bulbi—and especially of the vessels in the episcleral tissue surrounding the cornea, and which appears of a deep red color,—slightly increased tension of the eye-ball, cloudiness of the aqueous humor with consequent impairment of sight, discoloration of the iris and the early formation of attachments of the posterior surface of the iris to the anterior capsule of the lens, present the visible local symptoms of the disease in its beginning, frequently, and especially in acute cases, accompanied with headache, nausea, vomiting and slight fever. Pain in the eyeball, usually in its anterior portion, and neuralgic pain in the province of the trigeminus, is very often slight during the first days, but generally increases after a short time, and very much disposed to cause severe exacerbations during the latter part of the night, rendering the patient exceedingly uncomfortable, and making sleep entirely impossible.

Diagnosed in time, and simply treated with frequent instillations of atropia and, if indicated, with local depletion, confining the patient to a dark room, or at least shading the light off by means of large, dark-colored glasses, regulating the bowels, etc., this affection will be brought to a favorable termination within a few weeks, leaving very little or no trace whatever of its former existence. If neglected or not recognized in time, posterior synechiæ are soon established, and will after a short while resist more or less the mydriatic action of atropia. As the pupil is usually greatly contracted at the commencement of the disease, and therefore the swollen pupilary margin of the iris in that condition touches the anterior capsule of the lens, the plastic condition emanating from the circulus minor will soon result in the formation of synechiæ, circular in shape. These attachments, not disturbed by atropia, will become firmer and more complete after a lapse of time; the communication between anterior and posterior

chambers will be entirely abolished; which condition, if not removed in time, will ultimately prove disastrous to the eye affected. Frequent observations of such cases have shown that circular posterior synechia not combined with occlusion of the pupil, may exist for a while without giving any other inconvenience than that caused by the contracted field of vision due to the permanently reduced size of the pupil, which acts as a stenopaic apparatus. In the course of time, however, it may be after months or even years, there will be relapses of the iritis, brought on by slight causes. The communication between anterior and posterior chambers being intercepted, the intra-ocular pressure increases; after the attack, the tension of the eyeball may become normal again, but other relapses follow, and the intra-ocular pressure will increase to such a degree as to affect the entrance of the optic nerve; its excavation and subsequent atrophy will be the result and the picture of secondary galucoma will become complete, as well as the loss of sight.

In children and young persons, where the elasticity is greater, the pressure from within will expand this tunic, as well as the underlying choroid and retina, and scleral and ciliary staphyloma, combined with a deep anterior chamber, will present the most striking symptoms. The same pressure, however, will bring on also the excavation of the optic disc and its atrophy, combining, hereby, the staphylomatous expansion of the eyeball with the symptoms of secondary glaucoma.

In those cases where the attachments are not so complete as to form a circular synechia, or where the mydriatic action of atropia is strong enough to detach more or less those dangerous unions, the traces of the disturbance will remain, and impair the sight according to the extent of the remnants. There is no danger of developing secondary glaucoma, but a great disposition to relapses of iritis, as the attachments of the iris interfere with the free contraction and expansion of the pupil to light and accommodation.

Besides this, the disease may take quite another course, often observed in acute cases. The highly inflammatory condition of the membrane gives rise to a considerable exudation, filling the entire posterior chamber, and also the pupilary space, with a fibrinous mass, impairing sight to such a degree, that sometimes only quantitative perception of light is possible. Chemosis of the conjunctiva and increased tension of the eyeball; acute pain on pressure of the eyeball, accompanied with the gathering of pus cells in the anterior chamber, and forming the white mass in its lower part—known as hypopion—indicate that the ciliary body, and perhaps the choroid, has become involved in the process. The vitreous body and lens lose their transparency and the retina ceases in its function.

The symptoms of inflammation gradually subside, and the increased tension of the eyeball changes to the reverse; the bulbus becomes soft, often retaining a great sensitiveness to the touch, a condition which considerably inconveniences the patient; the other eye being generally slightly irritated and bearing the light badly, often entailing, too, the serious consequence of sympathetic ophthalmia. After the entire disappearance of the inflammation and its accompanying sensitiveness, the ultimate result is an atrophied bulbus with total loss of sight.

THE SECOND TYPICAL FORM OF IRITIS, IS IRITIS SEROSA,

formerly called hydromeningitis. In the great majority of those cases, the inflammation is very slight, the episcleral tissue assumes a pinkish color, indicating a limited injection of the episcleral vessels; in spite of the increased tension, the patient seldom complains of pain, except, perhaps, of heaviness in his head. The most annoying symptoms are intense photophobia and dimness of vision, caused by the turbid aqueous humor and the hazy appearance of the cornea, which, by oblique illumination, presents a "steamy" appearance, due to the fact that on its inner layer (Descemets membrane) there are numerous dots of different size, and of a gray color, composed

mainly of degenerated epithelial cells of that membrane. The deep anterior chamber is filled with a turbid aqueous humor containing numerous particles of these cells, partially held in suspension and partially gathering in the lower part of the chamber, following the laws of gravity, and easily disturbed by movements of the eyeball. The iris looks discolored—partially due perhaps to the cloudy aqueous humor—and responds sluggishly to the influence of light, but has usually not much tendency to form adhesions with the adjacent parts, so that little harm is to be apprehended in that direction, provided the proper treatment by atropia has been adopted. The whole course of the disease may pass off without any tendency to an acute period, only comparatively few cases being disposed to assume an aggravated form. In those rare instances, the tension of the eyeball increases rapidly to a dangerous degree, and all the symptoms due to a high intraocular pressure as above mentioned, will in turn develop, and if not carefully attended, will lead to the loss of the function of the organ. In the great majority of cases, general treatment is usually very desirable, besides the local one consisting of atropia, and perhaps inunction of mercurial ointment in the temporal region. The greater number of those patients being of a delicate constitution, or of a gouty and rheumatic predisposition, should be improved in their general health, and be treated according to the various conditions, so as to lessen the tendency to relapses of the disease.

A THIRD FORM IS THE IRITIS GUMMOSA OR SYPHILITICA,

so frequently observed in syphilitic patients, who contribute a very considerable percentage to the number affected. As a rule, this complication of the constitutional disease appears within the second or third month after the infection, and accompanies the roseola and the formation of papulæ on the skin and the mucous membrane, but there are a good many exceptions, where it appears later, not following any special constitutional symptom. In a great number of

cases the presence of general syphilitic symptoms alone decides the syphilitic character of the iritis, the symptoms being the same as in iritis plastica, with the exception that the nightly exacerbations of pain in the eyeball and in the supraorbital region do not correspond with the comparatively moderate inflammation of the bulbus, but indicate their relation with the general affection. Quite a number, and especially those (cases) who have not been put under anti-syphilitic treatment, at the commencement of the constitutional disease, present soon the local specific symptoms; the color of the iris changes into a deeper tint, due to the extreme hyperæmic condition of the membrane; the pupilary margin thickens in one or several places, rendering the circular shape of the pupil irregular; the thickened portions become more prominent very soon, and a small, well-defined tumor or tumors can be distinguished, originating within the layers of the iris tissue, near the margin. These tumors, or more correctly called, gummata, according to their histological character, have the tendency to grow rapidly, and often a few days suffice to fill the greater part of the anterior chamber with their brown, yellowish mass; firm synechiæ form, and the exudation covers completely the remaining free space of the pupil, reducing the already much-impaired vision to a very low degree. Inflammation and intraocular pressure, combined with severe pain, increase, and if not checked in time, will lead to the same sad results as plastic iritis, in its acute, inflammatory state. The ciliary body, as well as the choroid, are drawn into the process, and ciliary and scleral staphylomata, with their consequences, or even perforation of the cornea or sclera, will be the final symptoms. A very energetic anti-syphilitic and local treatment, adopted in the commencement of the disease, succeeds in a great many cases. To avoid the dangerous developments of the symptoms just described, the patient should be brought rapidly under the influence of mercury; a condition which can be obtained in a few days by means of the inunction cure, combined with the internal use of calomel or sublimate. Such treatment is usually fol-

lowed by rapid improvement of those dangerous symptoms; the gummata grow smaller and the inflammatory condition of the whole eye decreases in a very short time; the final result is usually very favorable, as the function of the eye is more or less regained, and only slight traces, consisting in atrophied spaces of the iris tissue or synechiæ, etc., will remind of the former grave affection.

As a last form, or rather a complication of that disease, I may mention the spongy or gelatinous iritis, a very interesting form, not often witnessed, and only some years ago described for the first time. During the time I was connected with Dr. Knapp's Aural and Ophthalmic Institute, in New York, I had the opportunity to observe a few cases of that interesting complication. In one of these the patient had been suffering from specific iritis some eight or ten days, and presented the usual picture of that disease: excessive pain in the eyeball and supraorbital region and formation of a gummatous tumor on the pupilary margin, besides an eruption of papulæ on the skin. The aqueous humor appeared clear, so as to allow a full view of the anterior chamber; on the following day a brownish mass consisting of numerous fine filaments spreading in different directions, resembling very much the structure of a fine sponge, filled nearly the whole anterior chamber rendering the underlying iris and the gummatous tumor indistinctly visible. This mass changed its color within a day, becoming grayish white, showing a well defined pretty smooth convex edge, and looking entirely like the lens luxated into the anterior chamber. Under severe antisyphilitic treatment, this mass commenced to shrink rapidly, and had disappeared entirely on the fourth day after its appearance, leaving no trace whatever of its existence. During this time the other symptoms had become more favorable and the gumma had grown very small. The same complication was also observed after extraction of a senile cataract and in a case of plastic iritis, proving hereby that this peculiar formation is independent of the general character of the disease. There is no special

care necessary, as the usual treatment for iritis is adopted.

I hope I shall be pardoned in making these few remarks, which do not intend, as above mentioned, to give a complete picture of iritis and its consequences, but which, as I hope, will draw the attention to that important disease, so that a great deal of suffering and misery may be prevented.

ASPIRATION IN THE TREATMENT OF SUPPURATING BUBOES.

By P. V. Schenck, M. D., St. Louis.

THERE is, and always has been, much interest felt in the case of venereal, as well as pestilential diseases, as to the proper method of dealing with buboes. Writers as far back as Hippocrates have given very minute directions for the treatment of abscesses in the groins. Each has fought tenaciously for his peculiar view, and each has presented to the profession either a new process to meet the symptoms or some modification of a preceding recommendation. Thus marked illustrations have been given of the ill effects of non-palliative treatment; while, on the opposite side, such cases are reported as that by Dr. Lente in the New York *Medical Journal*, where, owing to the treatment of bubo by mere palliatives, the patient died from peritonitis, and on *post-mortem* examination a probe could be passed from the bubo into the abdomen with ease, and on opening the cavity it was found to have been the seat of acute peritonitis.

I have no intention to refer to the preventive treatment or the use of agents to avert suppuration; leaving out entirely as to whether it is better to apply iodine, aconite, mercurial ointment, belladonna, ergot, a blister, or use pressure with rest; but I desire to mention, in comparison

with the usual treatment, what operation has with me, from experience, proven successful in cases where pus can be detected, and it is evident that resolution is impossible.

All authorities advise the letting out of the pus, and thus relieve pain and constitutional disturbances, prevent the abscess enlarging by limiting the destruction of tissue, and also removing the accumulated fluid, thus allowing the surfaces to unite.

To accomplish this, various modes have been adopted. Vidal, in 1852, recommended that when the abscess was recent and suppuration not extensive, one puncture at the fluctuating point be made. When the accumulation of pus was large, he used a number of incisions. This is known as the treatment by "multiple puncture." Langston Parker recommended that six, eight or ten grooved needles be introduced; Bonnafont, a seton. Malapert and Reynaud applied a blister and a pledget of lint wet in a solution of corrosive sublimate, so that an eschar would be formed, which, when removed by a poultice, would leave a minute opening in the integument; acids and even the Vienna paste have all been used for like purposes. The mode, however, generally used by surgeons, is to open with a free incision and to remove such portions of integument, or such isolated glands, as may interfere with the reparative process—in other words, to transfer the abscess into an open wound, which heals by granulation. The after-treatment has been, as advised by Parker, to inject iodide of potassium in solution, or, as recommended by Roux and Marchel, to use tincture of iodine, or in cases where free incisions have been used, to pack the wound with lint so that it will heal from the bottom, and if the granulations are fungous, repress them by escharotics.

The treatment which is far preferable, and to which I refer in cases of suppurating buboes, whether they be simple, sympathetic, inflammatory, or whether they be buboes of absorption, or virulent (chancroidal) buboes, is to remove the pus by the means of a small sized Dieulafoy aspirator. Aspirate early, do not allow the integument to

become thinned; enter the needle in the sound tissue between a quarter and a half an inch above the diseased gland, passing from above downward into the abscess; draw out all the pus and remove the needle under pressure;—the operation to be repeated only as the cavity fills up, which I have never had to do more than three times in any one case. There is but little pain attending, and no after-treatment except to abstain from excessive exercise. Thus, all the benefits of the other modes are obtained without any of the ill consequences. The skin and cellular substance is not impoverished and detached as in multiple puncture. There is left no troublesome open wound which will require packing and compel the patient to remain in his room for at least from two to four weeks, as in the free incision. There are no disfiguring scars, as when caustics are applied; but the cure is complete and rapid—no trace of the disease is left—there is no unsightly deformity in the way of contractures, and there are after it no cicatrices which leave a life-long blemish.

PUERPERAL ECLAMPSIA AND ITS SEQUELÆ.[1]

By J. H. Van Eman, M. D., Kansas City, Mo.

Case.—On the 10th of January, 1875, at 12:30, A. M., I was called to see Mrs. B. a young married woman, *æt.* 19. The messenger reported that she had some kind of a fit. Upon my arrival at the residence of the patient, I received the following history: She was in the eighth month of pregnancy with her second child: miscarried with the first at seven months; her health had been good during this pregnancy until within a week or two; since which time she had been troubled by diarrhœa and headache. On the 9th inst, they checked the bowels, and the headache grew worse. A little before midnight her husband

1. Read before the Kansas City District Medical Society at its December meeting.

was awakened by her complaints of pain in her head. The night being cold he requested her to pull the bedclothes over his shoulders. Her movements in attempting to carry out this request convinced him that something more than usual was wrong. He got up, lit the lamp, and commenced starting a fire. A few minutes afterward she had a convulsion, and he at once sent for me. I was at the house within one hour; arriving just after she had had her third spasm. While examining her, she had her fourth convulsion. Found her speechless, pupils insensible to light; breathing, hard, slow, and stertorous; pulse, sixty, full and incompressible; heart's action very powerful. Gave her fifteen drops veratrum viride, U. S. P., as an arterial sedative, and fearing irreparable injury to the brain, if the action of the heart was not controlled, I bled her from the arm to the amount of nearly thirty-two ounces; this had the effect of increasing the pulse to one hundred and fifteen per minute, and also greatly moderating its force. At 3 A. M., repeated veratrum and sent for chloroform, as she had had two more convulsions, and her general condition was getting worse.

Vaginal examination disclosed the fact that the ostium vaginæ and other parts were in a relaxed and moist condition. The os uteri was dilatable, and permitted the introduction of the tips of index and second fingers. By four o'clock she had two more convulsions, each more severe than those preceding it. I informed the friends that, in my judgment, the only thing that would save the patient was to deliver the child at the earliest possible moment; also that it was practicable. At 5 A. M., she had another convulsion, after which I gave her ten drops veratrum. Oiling my hand thoroughly, I introduced two fingers into the vagina, passed my second and afterwards my first finger into the os, and gently but forcibly commenced the dilating process, in the meantime steadying the uterus with my other hand. I gradually introduced my whole hand into the vagina and passed my third finger in beside the other two. In all this I attempted to imitate nature by giving periods of rest between the efforts to dilate. The breech presented. After dilating the mouth of the uterus to about half the size necessary for the delivery of the child, I ruptured the membranes.

During these efforts, which occupied two hours time, she had two more convulsions. I waited one hour, hoping that labor might set in. During this time I was able to prevent, or at least

she did not have, convulsions, by giving chloroform as soon as I saw the least twitching of the face. At 9 A. M., no evidence of labor being discoverable, I determined to deliver at once manually. Introducing my hand into the vagina, and two fingers into the uterus, I hooked first one and then both fingers over the thigh of the child and commenced traction. In thirty minutes I delivered her of a living child, and ten minutes later removed the secundines. The uterus contracted well, and but little blood was lost. I neglected to say that I gave her, about 3 A. M., a dose of croton oil, which did not act until 1 P. M. Sitting down by the patient, chloroform in hand, I watched for the slightest evidence of the commencement of a convulsive seizure, and at once smothered it down. Twice I succeeded, and the spasm was slight; the third time it, in some way, got the start of me, and she had a very severe eclamptic seizure, which proved to be the last. She had in all twelve convulsions, ten of these very hard. I kept her more or less under the influence of the anæsthetic for the next six hours. The urine was drawn off soon after delivery, and once in six hours for the following twenty-four hours; after that she passed it in the bed, as she had the fœces from the beginning. (The child died in convulsions when four days old.) From this time up to January 20th she lived like a child a few days old; anything that touched her lips she would try to swallow, and drank greedily any liquid put into her mouth. For the first five days she made no articulate sound; she also persisted in lying on her right side.

During this time her pulse ran up to one hundred and sixty and respiration to forty per minute. The heart's action, at this time, was very powerful or tumultuous, shaking her body at each stroke. A whirring sound was present over heart, arch of aorta and in both carotids. This *bruit* continued for over a month, and was always strongest when the heart's action was hurried. About the sixth day, speech began to return, the first word she spoke being "matches"—very indistinctly, however. This word she used to express all her thoughts and desires. The power of speech slowly returned, also memory of words, but there was little connection in anything she said. Many words she could not speak at all, others not correctly, and she frequently used a word that did not express the idea in her mind. Drink she pronounced driss, grand, grass, &c. By the 25th of January she knew what was said to her, and was sen-

sible to the calls of nature; could hear the whistle of the locomotive and gave evidence she knew what it was. But little improvement in articulation, none in vision;—still stone-blind. It was now evident that in the right side of the face all power of expression was gone, but not of motion. In the whole right side, but particularly in the upper extremity, there was complete loss of what is sometimes called muscular sense; there was also decided paresis of the right side as well as anæsthesia. On the day above mentioned she was sitting bolstered up in bed, eating crackers. Put a cracker in her left hand and she had no trouble feeding herself. Put one in her right hand and she knew nothing at all about it. She moved the right hand and arm without any great amount of trouble, but could not tell at any time where they were. By the 27th there was evident improvement in intelligence; she began to connect ideas—connecting the whistle of the train with the idea of getting letters from absent friends. She was able for the first time to tell who she was, but used her maiden name instead of that of her husband. When corrected she saw her mistake at once. She still labored under the difficulty of being unable to recollect the names of things —often using one word when she meant to use another. Again, she cannot think of the word she wishes to use. Her pulse, respirations and nutritive functions were normal. By the 20th of March her general health was good, but in strength she was decidedly deficient. Said she could tell night from day, and in a strong light distinguish bright red or green. She had no knowledge of her past condition. Her speech was hesitating, and she connected ideas slowly.

A word as to general treatment. Morphine, Dover's powders, or opium was given in doses sufficient to produce quiet and sleep; iodide and bromide of potassium for their sorbefacient and sedative properties; tincture digitalis, as a heart tonic, was also used. When the pulse ran up to one hundred and sixty, on the fifth day, I brought it down to one hundred by the cautious administration of tinct. veratrum, and kept it there for four days by the same means. She was kept on full supporting treatment almost from the beginning, by giving brandy, milk, egg-nog, beef tea, quail broth, and later, iron and quinine. At no time in the history of the case was there any pelvic or abdominal pain or tenderness discoverable.

About seven months afterward, she aborted at the third

month. A month or two later they removed to Iowa, remaining there about two years. I saw her in December, 1877. She has a healthy child fourteen months old, which she is nursing. She thinks she can now use her right hand and arm about as well as ever she could. Has a slow, hesitating way of speaking, but talks sensibly and uses her words correctly. Her vision, however, is no better than it was six weeks after her convulsions. She called on Dr. Halley, who made an ophthalmoscopic examination. The retina of right eye showed abundant evidences of old blood clots, while that of left eye appeared nearly normal. The pupils fully and very quickly dilated after using atropine, and remained in that condition for more than two months. A course of phosphorus in combination with nux vomica was tried without any good results.

Such, gentlemen, is the history of a case which gave me much trouble and anxiety during its progress, and the sequelæ of which differed from any other case of which I had at that time ever heard or read.

The almost total blindness, resisting all treatment, was a disappointment to all concerned. Quite a number of medical friends to whom I spoke of the case were of the opinion that sight would gradually return; a hope in which I also indulged, only to find it fallacious. Instead of a more or less transient disturbance and loss of function, the result of congestion and perhaps of slight effusion, we must have had in this case a permanent destruction of brain tissue, either as a result of embolism and consequent softening, or a rupture of one or more arteries and the consequent blood clot and its results.

The nature and situation of the lesion or lesions in this case I shall attempt to ascertain in this article. Gall was the first who attempted to localize and map out, by the external configuration of the skull, the various functions of the brain, and like everything new and novel, he had many followers and imitators. Phrenology, however, contained so many improbabilities, not to say impossibilities and absurdities, there was so much chaff and so little wheat, that in time it fell into the hands of charlatans. Nevertheless the investigations of Gall and Spurzheim were the germs

of all modern scientific research upon the localization of the various functions of the brain. The limits of this paper will not permit any reference to the parts of the brain other than those supposed to be implicated in the case reported. We evidently have in this case lesions of the following portions of the brain: 1st. That portion which presides over the memory of words and articulation, causing amnesic aphasia. 2d. Lesion of the tactile center of the right side. 3d. A lesion of the visual centers, destructive in character, and, unlike the lesions first mentioned, permanent in its results.

I trust you will pardon a brief notice of the anatomy of the parts of the brain concerned in such lesions as are above described. The posterior extremity of the third left frontal convolution, where it abuts on the fissure of Sylvius and overlaps the island of Reil, corresponding externally with that portion of the skull in front of and below the left parietal eminence and above the squamous suture, and bounded anteriorly by the coronal suture, otherwise known as Broca's region, is believed by Ferrier and other investigators to be the center for articulations, and particularly for the memory of words and ideation.

According to Ferrier, the center for the sense of touch, or cutaneous sensibility, is in the hippocampal regions and in close relation to the outer portion of the optic thalami and corpora striata. The visual centers are the angular gyri. These lie behind and above Broca's region and correspond pretty well to the parietal eminences. Below these centers, at the base of the brain, and from before backwards, we have the corpora striata motor centers, optic thalami, the functions of which are as yet "*sub judice*," and tubercula quadrigemina, which preside over the sense of sight.

All these parts are supplied by the middle cerebral artery and its branches. Granting that in this case the lesions are too severe to arise from any cause other than embolism or cerebral hæmorrhage, an attempt at differentiation will come next in order.

In this connection it will be well to say that Dr. Fordyce Barker, in his work on puerperal diseases, reports five cases in which there was more or less loss of vision as a result of puerperal albuminuria. One case was aphasic and deaf, and one had paraplegia. All these cases were œdematous and all completely recovered on disappearance of œdema and albumen, the recovery being completed in from six weeks to ten months. The cause of these nervous disturbances he ascribes to reflex irritation. It occurs to me that there might have been an œdematous condition of the nervous centers presiding over the perturbated functions. I regret exceedingly that no examination of the urine was made in my case.

According to Hammond, embolism is generally accompanied by disease of the left side of the heart. There is a rheumatic history. The resulting hemiplegia is usually on the right side, and if not recovered from in a few hours is permanent.

In this case there is no history of heart trouble or rheumatism. There was a premonitory headache and there was utter unconsciousness after the first convulsion. Dr. Hammond teaches that the usual seat of cerebral hæmorrhage is in the motor tract, preëminently in the corpora striata and optic thalami; next in order of frequency, the middle lobes, generally in the gray matter. If not in the corpora striata or optic thalami it is apt to be in contiguous parts. The middle cerebral artery, which supplies this part of the brain, is according to Gendrin the frequent source of cerebral hæmorrhage. Hammond, "Diseases of the Nervous System," page 89, says: "Extravasated blood undergoes certain changes. Instead of dividing into two parts, the clot and serum, as does blood when exposed to the atmosphere, it remains for a time homogeneous and gelatiniform. About the fifth or sixth day it separates into two parts; the one, the serum, is absorbed by the surrounding tissues; the other, consisting mainly of the fibrin and the red corpuscles, contracts and becomes hard. By the fifteenth day it

has become fibrinous in texture and is changed from its former black hue to a yellow color. It never entirely disappears."

Taking the aphasia as the first lesion to investigate, I quote from Hammond (loc. cit.) as follows: "When the extravasation, beginning in the left optic thalamus or corpus striatum, extends to the fissure of Sylvius so as to involve the posterior part of the third convolution, the island of Reil, or other part supplied by the middle cerebral artery, or where it originates in this region, aberrations of speech occur; these are independent of paralysis of the tongue, and are such as are embraced under the head of aphasia."

He also teaches that when we have aphasia without hemiplegia,the gray matter is involved; with hemiplegia,the motor tract is the seat of the lesion. The first he calls amnesic aphasia, or the loss of the power of ideation; the second ataxic aphasia, in which the power of articulation is lost, the memory of words remaining intact. Both conditions may exist in the same patient. This was the case in my patient, there being hemiparesis with slight paralysis of the tongue, shown by inability to utter dental sounds, and by her loss of memory of words.

Ferrier, in "Functions of Brain," says: "Destruction of the hippocampal region viz.: hippocampus major and uncinate gyrus, destroys tactile sense on the opposite side. The lesion is permanent." In this case there was hemianæsthesia of the right side, temporary in character; therefore, this center was not destroyed.

Ferrier, page 182 (loc. cit.), says: "Rupture or disorganization of the internal capsule or peduncular expansion of the crus cerebri causes hemianæsthesia of the opposite side." This arising not from a destruction of the tactile center, but from an interruption of the path of transmission from the integument to the center of touch. This lesion also seriously impairs vision, or completely abolishes it on the same side in which cutaneous sensibility is destroyed. In lesions of the corpus striatum, we have cross paralysis

and difficulty of articulation, from paralysis of the tongue. According to Hammond and others, lesions of the optic thalamus produce double vision, blindness, hemianæsthesia or hemihyperæsthesia. Lesions of the tubercula quadrigemina produce hemiopia. Overlying these basal ganglia, we have the angular gyri, that portion of the cerebrum which, according to Ferrier and others, is the center of vision.

Ferrier (loc. cit., page 164) says; "Destruction of the angular gyrus on one side causes blindness in the opposite eye. The loss of vision is complete, but not permanent if the angular gyrus of the opposite hemisphere remains intact; compensation rapidly taking place, so that vision is again possible with either eye as before. On destruction of the angular gyrus in both hemispheres, however, the loss of vision is complete and permanent, so long, at least, as it is possible to maintain the animal under observation. When the lesion is accurately circumscribed in the angular gyrus, the loss of vision is the only effect observable; all the other senses and the power of voluntary motion remaining unaffected."

A somewhat careful study of the case leads one to the belief that the lesion was a double one. First, there was rupture of a blood-vessel with a quite large extravasation in the gray matter of the left angular gyrus. This clot, by its pressure forward, produced the aphasia; the downward and backward pressure upon the optic thalamus, corpora striata and peduncular expansion of the crus cerebri produced the motor paresis and hemianæsthesia of the right side. There was also a clot from another ruptured artery involving the right angular gyrus, and this clot was comparatively of small extent. As the serum of the clots was gradually absorbed, the pressure on the contiguous centers was removed, and they gradually recovered their functions. The angular gyrus, or the left side, was completely disorganized and destroyed, while on the right side a very small portion of the gray matter of the angular gyrus retains its functions.

CASES FROM PRACTICE.

EXCISION OF THE ENTIRE LEFT UPPER JAW AND RESTORATION OF THE FEATURES BY MECHANICAL MEANS.

By Lewis A. Lebeau, M.D., and H. M. Keith, D.D.S., St. Louis, Mo.

This case is reported particularly for the purpose of exhibiting the benefit to surgery of mechanical dentistry as a supplementary aid in overcoming distortion and disfigurement in cases when further surgical interference is deemed unwise or doubtful in result; and, at the same time, to show the very decided progress made of late in that department.

Additionally, the case is thought to be instructive and worthy of record, as we are enabled to give an accurate history of it from the commencement, and also the progress of the malignant growth, which was apparently hastened to a culmination by local injury, and probably originated from unrecognized chronic inflammatory action, the result of traumatism.

Y. M. B., aged 39, native of Bordeaux, France, by occupation a sailor, but for the last twelve years a farmer, residing in Michigan, married and of temperate habits. Has always enjoyed good health, and there is no history of syphilis or scrofula. His family history is unexceptionally good.

Sometime during the year 1859 he suffered pain in the left superior molar, for which the tooth was extracted. He says that the alveolar process was split during the operation, but no pieces of bone came out. From 1859 until 1871 he continued to enjoy his usual good health—never felt a pain nor an ache in his jaw. During the summer of 1871 he suffered from intermittent fever, and during the following winter he began to feel lancinating pains in the left superior maxilla. The pain was always more intense and acute at night, after he had retired. He consulted no one about these pains, but tried many remedies; cold water proved most efficacious; this he used both internally and externally by filling his mouth with it and applying wet cloths to the cheek. These pains disappeared during the following spring, and nothing unpleasant supervened to annoy him or disturb his health till 1873, when he noticed, for the first time,

a *depression* (his word) in the alveolar process whence the tooth had been previously extracted, and which, he says, increased more rapidly anteriorly than posteriorly. He consulted a physician, who told him he had lupus. During the same year he received a violent blow about half an inch below the left eye, and although the skin was not broken, still the pain was excruciating for about half an hour. About three months later he noticed upon the maxilla, at the point he had received the blow, a small tumor about the size of a pea, with the skin perfectly movable upon it.

About a year after, the swelling was beginning to invade the the inside of the mouth, as well as the left nostril.

When I first saw him (April, 1878), he stated that the growth had been increasing slowly but steadily; that as far as he had been able to observe, it had not remained stationary for any appreciable length of time. At this time the growth entirlely filled the antrum, infringing upon the nostril, so as to entirely prevent respiration upon that side, forcing upwards the orbital plate, so as to produce *marked exophthalmos* and seriously interfering with vision; otherwise there was but slight facial deformity. At that time he suffered no pain and his general health appeared unaffected. Upon consultation, it was decided to excise the jaw, which accordingly I did, on the 9th of April, 1878, by Fergusson's method, under the influence of chloroform.

No unpleasant constitutional effects followed the operation, but on account of the great hæmorrhage from an artery lodged in the bone, and which could be controlled only by tamponning the wound with lint, saturated with a solution of persulphate of iron, it was impossible to bring the cut edges together until the eighth day, at which time the plug was finally removed. Union did not, however, take place. The longitudinal line of incision failed to unite, and though several attempts were afterwards made by freshening the edges, it was without avail. The tissues retracting and the wound cicatrizing, patient was discharged on the 10th of May, with an opening which will be described in the account following:

The appearance of the case when first presented for restoration of the parts is portrayed in Fig. 1. Through the opening in the cheek may be seen the vomer, which was uninjured. There was also an oval opening from the mouth into this cavity, which can be seen in Fig. 2 A, which represents the condition of

the mouth. The roots of the molars on the right side being badly decayed, were removed, their retention interfering with the perfect adaptation of the plate: Only five teeth remaining in the upper jaw. [Fig. 2 represents the mouth open to its *full extent*, but the man could only open it half an inch, as will be seen a little farther on.] Fig. 3 is a cast of the mouth, showing the extent of the opening.

Fig. 1. Opening into Naso-Pharyngeal Space.

The first requisite was a perfect impression of all the parts. An impression of the cavity in the face was obtained in the following manner: A piece of bibulous paper was moistened with cosmoline, and carried back so as to close the posterior opening into the pharynx; a piece of gutta-percha in the mouth closed the opening from below to prevent the plaster from falling through. A small portion of plaster was then introduced, taking an impression of the posterior third, this was removed, trimmed, varnished and oiled, and introduced, when, by the same method an impression of the anterior third was obtained; there remained then a V-shaped space between these pieces, an impression of which was taken by a third portion

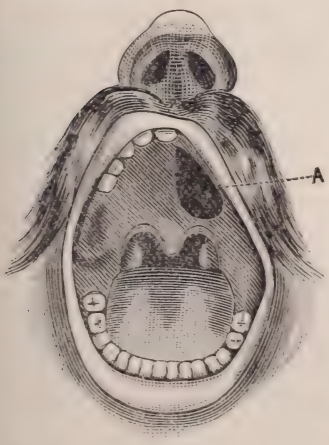

Fig. 2. Appearance of the Mouth if Fully Distended.

of plaster. From these pieces, when removed, a complete model of this opening was made, and on this model was constructed a hollow shell which fills the cavity. The appearance of the shell can be seen in Fig. 4. [In the engraving the two parts are slightly separated to show the line of union.]

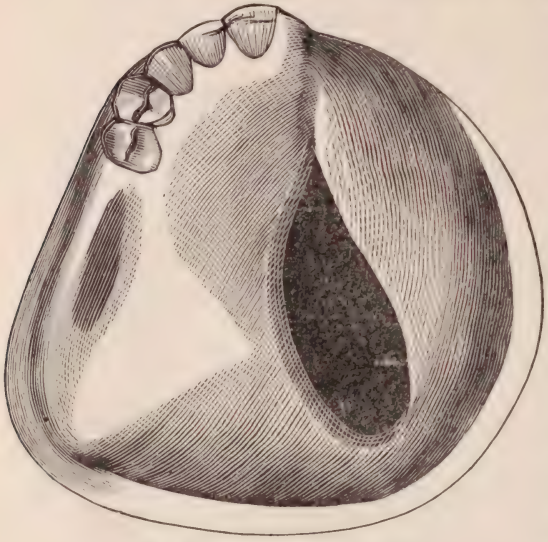

Fig 3. Cast of the Mouth, Life-size.

To introduce the shell, it was first annointed with cosmoline, and then pressed into place with the fingers of the left hand, gradually turning the piece downward until in position.

The object of this shell was to prevent so large a volume of air passing through the nose, giving to the voice that peculiar nasal sound observed in cases of cleft palate; to give partial support to the plate to be made for the mouth, and to supply the place of the floor of the orbit, lost in the section of the maxilla.

The impression of the mouth was not so easily taken. The muscles attached to the inferior maxilla upon the left side had contracted so much that the patient was unable to open his mouth more than half an inch. A rough impression was first taken with an ordinary dental impression "cup"; and from the

Fig. 4. Plate and Shell.

cast so obtained a "special" impression cup was made of wire and pink dental gutta-percha, and with this "cup" or tray an excellent impression was secured. Fig. 3 shows the cast made from this impression, and on this, was made the plate seen in Fig. 4. The plate was not intended to assist in mastication, but to hold out the lip and cheek on the left side and hold the shell securely in position. A gold clasp passes around the second bicuspid, and a heavy gold dowell pin secures the proper relative adjustment of the plate and shell, and holds them firmly together.

The position of the pin can be seen in the line of separation between the parts in Fig. 4.

A thin plate of uncolored celluloid was made to cover the open end of the shell, and to complete the contour of the cheek; this was painted flesh color, and at a little distance could not be noticed. It is held in place by an elastic band fastened to a hook within the shell, and another on the inside of the cheek piece.

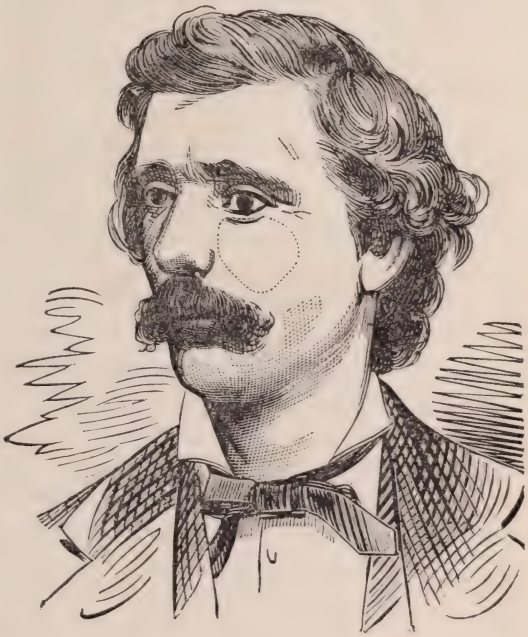

Fig. 5. Cheek-piece in Place.

Fig. 5, taken from a photograph, is intended to represent the patient's appearance when all was completed, and the pieces in place; but it is but fair to state that the cut is not flattering to the original. The appearance, however, is but a small consideration beside the other advantages to the patient, derived from the apparatus. Before its introduction, the cavity was stuffed with strips of linen, which had to be frequently replaced, as they became saturated with the secretions; the continuation of this

practice would have resulted in a greater loss of tissue by absorption, owing to the pressure exerted by the tightly-packed linen. His speech was hardly intelligible. Now his articulation is perfect, and there is nothing repulsive in his appearance.

ST. JOHN'S HOSPITAL.

LACERATED WOUND OF ANKLE JOINT.—RECOVERY WITH PERFECT USE OF JOINT.

BY T. F. PREWITT, M. D., *Prof. Clinical Surgery, Missouri Medical College.*

On March 15, 1878, Jos. F., aged about 25, healthy and vigorous, was injured by the giving way of the joists of a large ice house, covered with plank, upon which was piled a large quantity of saw-dust, the whole having been precipitated a distance of fifteen or twenty feet, and catching him under the mass. When seen an hour or two after the accident, there was found a rent over the front of the right ankle, two inches in length, which laid open the joint, and from which hung a portion of the peroneus tertius muscle, six inches in length, completely torn from its attachment to the fibula above, but still attached by its tendon below.

The heavy calf-skin boot which he had on at the time of the accident was uninjured, and it was puzzling, at first, to account for the character of the injury. On closer inquiry, it was found that he had fallen forward upon his face; that the right leg and foot were stretched upon a plank; the mass of planks, saw-dust, &c., from above, falling upon him in this position. It was clear, then, that the foot had been forcibly extended; the integument, annular ligament and capsule of the joint, had been torn through, while the peroneus tertius had been torn from its attachments above. Its extrusion from the wound, however, had only occurred upon manipulation by a physician who saw the case soon after the accident. The finger could be readily passed into the joint, but there was no displacement or fracture of any of the bones, nor bruising, nor lacerations of the surrounding soft parts. The hanging muscle was cut off within the wound; this was cleansed and sealed up with collodion, and a stirrup splint of plaster of Paris passed around the foot and up the leg,

leaving the site of the wound uncovered. A mass of oakum was placed over this and a bandage thrown around it. The foot was kept elevated on a pillow, and the wound left undisturbed for ten days. It was then cautiously examined, and found to be doing well, only a slight, superficial suppuration having taken place under the crust formed by the collodion and cotton. The opening into the joint had completely closed, without the slightest evidence of inflammation involving the structures of the joint at any time.

The plaster splint and oakum dressings were continued, but he was soon allowed to get up on crutches and move about the hospital. He was discharged May 10th, eight weeks after admission, perfectly well, with the functions of the joint unimpaired, save a little stiffening from non-use.

Immobilization of the joint, sealing up the wound, and *non interference* with it, were followed by a perfect result.

TRANSLATIONS.

THE PROPER TIME TO LIGATE THE CORD.

An Abstract of Dr. Ribémont's Paper on this Question in Annales de Gynécologie, Paris, February, 1879.

By A. Derivaux, M. D., St. Louis.

Since Dr. Budin's mèmoir in *le Progrès Medical*, Paris, 1875–1876, the above question has attracted renewed interest and been the subject of valuable contributions from Drs. Kohly, Hayem, Hélot and Porak in France, Schücking, Zweifel, Hofmeier and Leopold Meyer in Germany.

As the memoir referred to may have escaped the notice it deserved, it will be necessary, in order to comprehend the direction of these researches, to revert to Dr. Budin's experiments and conclusions. He operated on 62 cases, in 30 of which the ligation was made after the usual method, in 32, only two or three minutes after complete cessation of pulsations in

the cord. This is, says he, what we have witnessed in almost every case: If, after its birth, the child is left, breathing and crying freely, between its mother's legs, unsevered from her, one sees the funis, first deep blue and turgid, soon flatten and become pulseless after an average of 2½ minutes. If, after waiting 2 more minutes, the section of the cord is made, no blood trickles from its fœtal end, while the placental one will yield about 11 C.C.

If, on the contrary, the separation is quickly made as soon as the fœtus, disengaged from the maternal parts, has breathed once, the blood will be seen spurting out of the three placental vessels and an average of 98.4 C.C. of it can be collected. This goes to show *that to bind and make section of the cord right after the birth amounts to depriving the child of* 87.2C.C. *of blood, or in weight of* 92.6 grms., *or in Troy weight* 3 *ounces;* hence this conclusion: the section of the funis must be made only some minutes after complete cessation of the pulsation of its vessels.

About the physiological interpretation of these facts, Dr. Budin was of opinion that the progression of this blood was due to the thoracic aspiration of the fœtus, drawing in more blood by the veins than the funicular artery could send out; besides, this aspiration, produced by the gradual dilatation of the lungs, being brought to bear longer than the artery of the cord was permeable, thus nearly exhausted the residue of blood in the placenta. As a sequel to his conclusions, Dr. Budin further added: 1st. That this plan of treatment ought to be carried out even when the child was born in an asphyxic state, far from letting blood escape, as is usually done in such cases, from the fœtal end of the cord. 2d. That the practice he recommended made easier the delivery of the placenta it being then almost empty.

These researches, by their novelty, were well calculated to provoke verifications and start new experiments. Kohly, in his thesis, endorsed fully Dr. Budin's views; one year later came out Schüking's contribution.[1] His experiments, although made on a small scale, are very interesting. He contrived a handy balance, to be attached to the parturient's bed, which enabled him to make out with great exactness the child's weight

1 Zur Physiologie der Nachgeburtperiode untersuchungen, Berliner Klinik Wochenschrift, Nos. 1 and 2, 1877.

at its very birth, and note the changes thereof before and after the interruption of the fœto-placental circulation. Eight of his observations are summarized in the accompanying tables:

TABLE I.—IMMEDIATE LIGATIONS.

Obs.	Sex.	Weight at Birth.	Weight of Blood Extracted from the Placenta and Cord.
1	m.	3550 grm.	96 grm.
2	m.	4320 "	148 "
3		3500 "	78 "

TABLE II.—LATE LIGATIONS.

Obs.	Sex.	Weight at Birth.	Time During which the cord pulsated.	Time from birth to the ligation.	Weight at Time of Ligation.	Weight of Blood Extracted from cord and placenta.
4	m	3300 grm.	4 minutes.	8 minutes.	3370 grm.	8 grm.
5	f	2510 "	2 "	10 "	2580 "	12 "
6	m	3470 "	3 "	5 "	3570 "	24 "
7		3060 "	½ "	7 "	3090 "	10 "
8		3720 "		6 "	3760 "	10 "

These are Schüking's conclusions: The increase of weight in the fœtus takes place mostly in the two first minutes; the figures of this increase have been at the minimum, 30 grammes; at the maximum, 100 ; the average residue of blood in the placenta has been 13 grammes for the late ligature, while a mean of 99 grammes of it remained inutilized in its vessels when immediate ligature has been resorted to.

During the same year, 1877, Prof. Hayem and Dr. Hélot, in Paris, reached the same conclusion by the numeration of the globules, the former finding a gain of 489,000, the latter of 902,632 red corpuscles per m. m., cube in children on which late ligation had been made.

In 1878 appeared the contributions of Zweifel,[1] Leopold

1 *Centralblatt fur Gynecologie*, 1878, No. 1.

Meyer,[1] Hofmeier[2] and Porak.[3] Zweifel and Meyer made use of a more indirect method, but not the less precise: by chopping the placenta in minute fragments and exhausting, by several washings, the blood contained therein, they made out with great exactness the variations of its residual supply according to the time at which the ligation was made. In a first series of experiments the average difference was found to be 100, in a second, 81 grammes. Hofmeier weighed 32 children—1st, immediately at their birth; 2d, after expulsion of the placenta—taking care to maintain identical conditions; he found an augmentation of 63.6 grammes in favor of the late ligation. Lastly, Dr. Porak concludes, from his own experiments, that Dr. Budin's figures come nearest to the truth; but whether this be so or not, all the researches just referred to are a plain confirmation of the fact put forth by Dr. Budin, viz: That by immediate ligation the child is deprived of nearly one-third of its blood.[4]

Dr. Budin's physiological interpretation of the progress of the blood in the cord after birth has not met with the assent of every one of the observers. Schüking and Porak, without denying the thoracic aspiration any influence, ascribe this progression mostly to uterine retraction; but this, it seems to us, can hardly have gone far enough within 2 or 3 minutes to produce a real squeeze on the placenta; and for the contractions, they seldom take place before 8 or 10 minutes.

We have seen above what Dr. Budin advises when the fœtus is born in an asphyxic condition. Schüking, dreading anæmia most of all for the child, supports fully those views, and vindicates them thus: "From the moment the child begins to breathe, the condition of the blood-pressure in its circulation is greatly modified; the diminution of pressure in the thorax determines an influx of blood which lessens the pressure outside of the thorax; but the equilibrium is rapidly restored by the supply of blood from the placenta (*Reservblut*); this supply, by

1 *Centralblatt fur Gynecologie*, 1878, No. 10.

2 *Centralblatt fur Gynecologie*, 1878, No. 18.

3 *Considerations sur l'ictere des Nouveaux nes.* Th. de Paris, 1878.

4 It is generally admitted that the whole amount of blood in man is one-thirteenth of the weight of the body; taking 3 kilogrammes 500 grammes as the average weight of a full-term fœtus, we find for the amount of its blood 270 grammes.

abundantly irrigating the medulla, promotes the first inspiration. If, now, this be cut off by immediate ligation, the equilibrium will take place at the expense of the general circulation and the medulla be deprived of a part of its natural excitant. The accumulation of carbonic acid in the blood soon stimulates it again; but the lungs dilating more and more by successive inspirations, the influx of blood increases in the thorax while the rarefaction goes on in the medulla, making the periods of rest grow longer and longer, and the inspirations grow weaker and weaker, till death puts an end to the struggle." This theory tallies completely with Fritsch's remark that in asphyxic infants the prognosis is much worse when the inspirations are deep and spasmodic than when superficial at first, and afterwards gradually deeper.

It remains now to show that the gain the fœtus derives from a late ligation of the cord is not attended later on by any drawback. Here again the balance was brought to play, and placed beyond doubt the fact that, far from experiencing any damage from the practice recommended by Dr. Budin, the child loses less and regains in weight sooner than it would otherwise. Schücking found that in most cases where the cord had been immediately ligated, the children reached their primitive weight from the 10th to the 16th day, while the others did so from the 4th to the 6th. Zweifel's conclusions are that in 11 children of late ligation, the average physiological loss has been 156 grammes; in 25 of immediate ligation it was 211, difference 55. The habitual loss agreed upon by the authors is 220 grammes.

Hofmeier, operating on 90 cases, made out that children of late ligation lose 1 per cent. less of their weight than the others, and regain it sooner. Lastly, Dr. Alban Ribémont, of whose memoir this paper is a short abstract, weighed in Prof. Tarnier's clinic 104 children every day of their two first weeks, admitting only the cases where the mother was healthy and nursed herself. He found, as an average, that when immediate ligation had been made, the child weighed on its 10th day 50 grammes less than on the first, while where the cord had been ligated only after extinction of its pulsations, there was on the 10th day a gain of 101 grammes.

To bring this subject to a close, we have yet to take note of Schüking's remark, that a late ligation facilitates the placental

delivery after Crédé's method, an empty after-birth being more easily forced through an already contracted neck than a full one.

CONCLUSIONS.

1st. The umbilical cord must be ligated only after its pulsations have entirely ceased.

2d. By this delay the fœtus gains directly an average of 92 grammes (3 ounces) of blood, and is placed in the best condition for further development.

We do not feel justified by the foregoing statements in recommending, with Dr. Budin, Schücking and Alban Ribémont, the same practice in case of blue asphyxic condition of the fœtus. It seems to us that to upset a treatment recommended by secular experience—namely, a small blood-letting by the fœtal end of the cord—something more than mere theory should be required.

PERFORATION OF THE UTERINE WALLS, WITH THE UTERINE SOUND.

By Dr. C. Liebman, of Trieste.

"Within a few months it has happened to me twice to perforate, unintentionally, the fundus of the uterus with the uterine sound.

"Case I.—S. O., aged 38 years, a woman healthy in appearance, entered the civil hospital of Trieste for hysterical troubles. She had previously had four accouchments at term, the last having taken place in February, 1872. That accouchment was terminated by the birth of an infant presenting by the pelvic extremity and who died during the labor.

Except habitual constipation, this woman complained of no other functional trouble. All the organs of the abdomen are normal as to size and form. The liver sinks down notably when the patient is up, but it resumes its position when she lies down.

Although this woman complained neither of leucorrhœa nor pains in the pelvis, nor any irregularity in the courses, I decided nevertheless to examine the genital apparatus in order to discover the cause of the hysterical symptoms.

Aug. 9, 1872, I proceeded to this examination. The uterus seemed normal; it was mobile, the vaginal portion short and presented some cicatrices.

I introduced Simpson's sound making use, as always, of the finger to guide me and taking the utmost precautions. The instrument, introduced in the usual direction, did not stop on penetrating into the uterus; when it had been introduced to the depth of 17 1-2 centimeters (6.8 in.) the woman commenced to complain of some pain at the umbilicus, and having examined that region, I found that the extremity of the sound was behind the abdominal wall and reached to a few millimeters below the umbilicus. The sound could be freely moved in the abdominal cavity.

Having withdrawn the instrument, the pain disappeared and did not return. There was no flow of blood from the genitals and the woman in no way resented the lesion which had been produced.

It was in vain that I racked my brain. I could not account for that phenomenon. I attempted some explanations, but none were satisfactory.

Not thinking of the possibility of having perforated the uterus, I repeated the experiment some days afterward.

August 19th, in the presence of Prof. Antonio Comelli, I introduced one of Kiwisch's sounds about seven centimeters. Having reached the fundus of the uterus the instrument paused, and I was about to withdraw it, when after a light movement of the lever, I felt suddenly that I had just overcome an obstacle, as if I had passed a valve, and the sound penetrated to the same depth as the first time, and the extremity of the sound could be distinctly felt under the umbilicus.

The next day I submitted the patient to a minute examination, making repeated and combined (bimanual) examinations both by the vagina and the rectum. The abdominal walls were very flaccid and permitted perfectly to distinguish the uterus, which was not larger than in the normal condition. Neither did I find any alteration in the rest of the pelvis.

Aug. 27.—I introduced the sound of Martin with the same result as before. Dr. Menzel, my colleague, assisted at the experiment. There was again this time an instant of pain, which ceased when the instrument was withdrawn. Finally the examination was followed by a light flow of blood, which

lasted about twelve hours, but without pain and without febrile reaction.

The patient left the hospital Sept. 1st and re-entered June 20, 1873, complaining always of the same hysterical troubles. The woman's appearance was blooming. The courses were regular. This time again the sound of Kiwisch was introduced as far as the umbilicus; there was the usual pain, but it was not followed by hemorrhage. A few days afterwards I proposed to make yet another examination, when the little memoir of Rabel-Rückard and Lehmus fell into my hands. I comprehended that I had perforated the uterus (4 times!) I did not wish to assure myself of it by other examinations, and sent the patient home."

Case II.—This was also a hysterical woman, a nullipara, 24 years of age: amenorrhœa had existed for a year—no leucorrhœa nor other symptoms of uterine disease—general appearance good—some slight redness at the vulvar orifice, especially about the carunculæ myrtiformes—slight vaginismus—uterus situated a little to the left, but mobile and not sensitive.

"The direction of the uterus is normal, the sound arrives at the fundus after having met some resistance at the internal orifice. The uterine cavity measures 5 1-2 centimeters (2.2 in.) The introduction of the sound is followed by a very slight hemorrhage."

In the treatment, the sound was introduced every day and allowed to remain a few minutes to stimulate the uterus.

"Oct. 20.—I introduced the sound without difficulty.

Oct 21.—The tip of the sound met in the region of the internal os a greater resistance than yesterday, so that I gave up making it penetrate to-day into the uterus.

Oct. 22.—I introduced the sound as far as the internal os. Then I used slight pressure to overcome the obstacle; having succeeded readily, after having passed the internal orifice, the sound penetrated into the uterus to the depth of five centimeters more. The patient complained then of a sharp pain in the belly. I paused, without drawing back the sound. The pain ceased suddenly, and a very light pressure carried the instrument still further to about 14 centimeters (5.5 in.) from the external orifice without producing pain. The thickness of the abdominal walls did not permit me to feel the extremity of the

sound and I withdrew the instrument. A very light hemorrhage followed this examination, but there was no pain.

During the middle of the day the patient complained of some pains comparable to colic. The flow of blood continued. We made the ordinary cold applications over the abdomen.

Oct. 23.—The flow of blood has ceased, the patient complains of no pain; but the hypogastrium is slightly sensitive to pressure. The thermometer placed in the axilla marks 38.9°C (102°F.)

Oct. 24.—Temperature and pulse are normal; the tenderness of the abdomen has ceased, the patient is very well.

From this day I shall no more practice the introduction of the uterine sound.

The perforation of the uterine walls was produced in my two cases, as in those of some other gynecologists, with so much ease, that I could not indicate the moment when the tip of the sound pierced the fundus of the uterus."

Dr. Liebman was led by this clinical experience to institute a series of careful experiments upon the cadaver. He experimented upon one hundred bodies and carefully tabulated the results. In regard to the ease of perforation he found 23 cases in which he perforated the uterus with such ease that he was not aware when the tip of the sound had torn the uterine walls in those cases he only knew that the uterus was perforated by the depth to which the instrument penetrated.

"Two of these twenty-three women had never had children, the others had all been confined one or more times. Seven only of the twenty-three uteri could be considered as sound and free from every alteration."

In forty-two cases the perforation was made easily, that is to say, by the effect of a light pressure, of a light movement of the lever, in which he felt distinctly the instant when the point of the instrument tore the uterine tissue. Of the forty-two women, eleven had never had children, thirty-one had been confined one or more times. Only eight uteri appeared perfectly healthy. The others were more or less altered."

In eleven cases it seemed that the uterus presented a normal resistance, in which he employed a certain degree of force to perforate the uterine tissue, but in which the perforation was made at the first attempt. One of these women had never had children, but the others had been confined one or more times, six times the uterus presented alterations.

In twenty-four cases he could pierce the uterus only after repeated experiments, made with force, so great as to bend Sims' sound, before succeeding in making it pass into the peritoneal cavity he was obliged to change that sound for a more solid instrument. Nine of these women had never had children and fifteen had had them. In thirteen cases the uterus was normal, and in the eleven others it was augmented in volume as the result of chronic metritis. Some of these uteri had walls quite thick and very rigid."—[*Arch. de Tocologie, Dec.* '78, *Jan.* '79.

E. M. N.

EDITORIAL.

DR. A. J. STEELE, *Editor.* DR. W. A. HARDAWAY, *Associate Editor.*
PROF. E. W. SCHAUFFLER, M. D., *Corresponding Editor.*

"It is not so much what you ought to do, as what you ought to know not to do."—*Sir Benjamin Brodie, Lectures*, 1837.

IS ST. LOUIS TO HAVE AN EPIDEMIC OF YELLOW FEVER?

LET us not be called alarmists if we direct the attention of our Board of Health and city authorities to a fact which may prove of vital importance to the health of our city during the approaching summer, and which may also affect seriously the business interests of this community. We refer to the danger that may result from the large influx of blacks that are now coming from the South; many passing through the city to Kansas and more interior regions, but many remaining here, either from choice or want of means to continue their journey. They come mostly from regions that last summer were devastated by the yellow fever, and they bring with them their household goods, bedding, clothing, etc.. Now, it is well known that during and after the epidemic of yellow fever, the infected clothing and bedding were not burned, but in most

cases merely thrown out, to be greedily appropriated by the lower class of the negro population—the very class which constitutes the majority of the present emmigration.

The vitality of the yellow fever germ has been proven to be very great; and it persists for an indefinite period, especially in woollen stuffs, even after it has been subjected to a degree of cold that formerly was considered sufficient to destroy it. A case of yellow fever occurring in one of the small lower river towns, in the middle of January last, fully illustrates this: A little girl contracted the disease (and communicated it to others) from playing on the carpet taken from the room in which a fatal case of yellow fever had occurred five months previously. The carpet had been thoroughly aired and exposed to the extreme weather of early winter, and yet the materies morbi was in it.

It is a fact, too, of frequent observation, that contagious effluvia are carried long distances by fomites. The recent terrible outbreak of malignant fever prevalent in Russia was brought from Turkey through the medium of a soldier's blanket.

The confidence that is felt in the immunity of this city from the danger of the spreading of yellow fever has been rudely and positively dispelled by the experience of last summer. And though at that time it did not extend and become epidemic, yet there were cases that did originate both in the city hospital and quarantine, and there were deaths from it at the latter. It were folly to entertain the belief that our elevation above the sea, that our northern latitude, that our complete drainage or perfect hygienic surroundings are all such as to render it utterly impossible that the fever could find congenial soil in our city, until we were stricken and overwhelmed by the dread scourge.

There are portions of our city that in all conscience sake are filthy enough to act as hot-beds, if once the seed were planted; and it is in just those sections that these poverty-stricken and infected colored people will find lodgment.

The lower river towns are expecting, this summer, a re-

currence of the epidemic of last season, and are preparing as far as possible for it. Let us, too, be wise, and now, at once, apply the ounce of preventive, for the time may come when even the pound may not be efficacious for the cure.

THE COLD SOUND (PSYCHROPHOR).

The *Berliner Klin. Wochenschrift* of July 9, 1877, contained the description of an instrument designed and used by Dr. Winternitz, of Vienna, for the purpose of securing the advantages of mechanical irritation of the urethral mucous membrane by the metallic sound, combined with the anæsthetic and tonic influence of cold. To fix the claim of priority as to the invention and employment of this instrument, we would quote the following:

From the *Humboldt Medical Archives*, St. Louis, Mo., 1868, Vol. II., p. 212: In the report of the proceedings of the Young Men's Med. Ass. of St. Louis, "Dr. Youngblood said he had observed a statement to the effect that Dr. Chas. Bliss, of Syracuse, N. Y., recommended for the treatment of spermatorrhœa, metallic sounds, reduced to a low temperature by previous immersion in ice-water, the local application of cold seemingly producing a very happy effect in this unfortunate complaint. As a substitute for the sound, which must very rapidly become of the same temperature as the urethra and thus lose its beneficial action, he (Dr. Y.) proposed a modified double catheter—such as is used in injections of the bladder. The fenestra should be closed and the internal partition carried only to within a fourth of an inch of the bottom of the instrument, which being introduced, a continuous stream of cold water could be made to pass through it, and thus the temperature of the part to be kept low and equable for any length of time. In the treatment of gleet and other affections of the urethra, this must answer a good purpose."

From the *Berliner Klin. Wochenschrift*, of July 9, 1877: Dr. Winternitz, of Vienna, describes an instrument, designed by himself, as follows: "It consists of a double-current catheter without eyes. the two canals communicating with one another near the point of the instrument. The instrument is introduced into the urethra until its point has passed the prostatic portion, and it is then attached by India-rubber tubing to a reservoir containing water, at the desired temperature. On turning a stop-cock, the water flows into one canal and out through the other, whence it is conducted away by another piece of tubing. In this way the caput gallinaginis and the entire urethral mucous membrane are exposed to the mechanical action of pressure and the sedative action of cold."

The success attained by Dr. Winternitz by the use of this instrument was so encouraging from the very beginning, that he had employed it constantly for over a year.

By reference to the record-book of the society referred to above, and to which we have access, the following minute, on page 71, is found, date of April 23, 1868:

"Dr. Youngblood presented a plan for the modification of the double catheter, to-wit, a hollow silver instrument, with a partition passing from above to within one-eighth of an inch of the lower end; this being introduced, a stream of cold water could be made to flow continuously through it, so that in cases where it was desirable to apply cold to the urethra a convenient and simple apparatus was had."

As the article of Dr. Winternitz has been going the rounds of the journals, both in Great Britain and America, and as the appliance was finding favor with the profession, we deemed it due Dr. Youngblood that his claims of priority (some 9 years) be established and put on record.

As early as 1868, A. M. Leslie, surgical instrument maker (5th street, St. Louis), manufactured and kept for sale (and does still) this double-current, hollow, metallic sound. We have used it in cases of spermatorrhœa with good effect. In one case of long standing, in which other treatment had been exhausted, this procedure afforded the greatest relief, being continued daily for many months. Having much confidence in the effectiveness of this instrument, we may be permitted to quote further from Dr. Winternitz:

He has treated with it twenty-two cases of pollution; of these, two did not return after the first application; one was improved at first, but soon became as bad as before, and the treatment was discontinued after the cold-sound had been used sixty-five times; twelve are still under observation, and have been somewhat improved by the treatment, the pollutions occurring very rarely, and the secondary symptoms, hypochondria, etc., having entirely disappeared. In three cases the improvement was marked, when the patients withdrew from observation; in two others the pollutions became less frequent, but the secondary symptoms remained unchanged. The two remaining cases are described in detail. In one the patient was a Russian officer, forty-six years of age, and the affection was due to excessive

venery. The pollutions occurred regularly in the night, after coition, and recurred two or three times a week, when the patient was continent. The cold-sound was used daily, for ten minutes, with water at 59° F.; during its employment the patient experienced a sensation of pleasant coolness, and the relaxed scrotum contracted energetically. Some difficulty was experienced in removing the instrument. During the four weeks that the treatment was continued, there was only one pollution. The erections became more complete. In the second case the pollutions were frequent, and there were symptoms of excessive spinal irritation. The first introduction of the instrument caused great pain, and brought on an hysterical fit, but these symptoms disappeared after the water (59° F.) had flowed through the sound for five minutes. The treatment was continued daily for three weeks, when the patient was discharged cured. He had not had a single pollution from the time the treatment was begun.

At the first sitting, Dr. W. sometimes uses water at a temperature of 64°, or even 65° F., and at a later period, sometimes goes as low as 54½° F. Besides the above, he has treated nine cases of spermatorrhœa with the cold-sound. In four of these cases he attained very favorable results; two cases were very markedly improved, while in the other three, the treatment was without special results. In the cases of spermatorrhœa, as well as in those of pollution, in which the treatment proved successful, general relaxation of the genitals and loss of muscular tone in the scrotum, were marked symptoms. The cold-sound was also used in five cases of too rapid ejaculation during coition, and in two cases of chronic, obstinate gonorrhœa. In the former, its use was followed by at least temporary improvement, and both of the latter, one of which had lasted three years, and the other six months, were cured.—*London Med. Record.*

In some, possibly in most cases, it would be best to combine the local treatment with constitutional; as the use of bromides, ergot, etc. S.

MEDICAL EDUCATION.

We have been requested to publish a call for a convention of all American Medical Colleges, to be held in the city of Atlanta, Ga., beginning at 10 A. M., May 2d, 1879, the object of which is to adopt some uniform system of instruction, more in harmony with the requirements of the age. Among the questions appropriate for discussion and decision may be mentioned: "Shall all the colleges require attendance upon their regular courses of lectures during three separate years ere admitting students to become candidates for the degree of M. D.?" "Is any uniform system possible in this or other things; if so, to what extent is it possible or even desirable, at the present time?" The convention "can only act upon what is practicable to all honest, efficient, medical schools."

We like that last word and could wish that all our medical colleges were simply medical schools. Not institutions for the conferrence of the degree of M. D., but for the imparting of knowledge, for the grounding and grinding into the minds of students the facts of medicine; to educate merely, not to grant diplomas—that latter being preferably delegated to a board other than a college faculty. Then would there be a laudable ambition or strife as to whose scholarship would rank the highest. We own that imparting knowledge and granting diplomas are not incompatible, but the student hopes for the latter with as little strife for the former as possible, and too often receives it.

We gladly publish such a call, believing that the agitation of this subject can but be productive of good. If the preamble of Prof. Gross is true: that all the efforts on the part of the American Medical Association, and of the State Medical Societies, and of the Medical Teachers' Associations, to induce the medical schools of this country to adopt a uniform system of instruction of a grade fully in accord

the with requirements of the age in other branches of study and with the practice of the medical institutions of Europe, have signally failed, then it is *not* also true that all the agitation of the past 32 years in this direction has been in vain and fraught with no good; for the marked progress and advancement that has been made in many colleges is certainly attributable to outside pressure. It has been asserted that the colleges are oligarchical and independent of medical-society resolutions and professional opinion. But it is not so—the power really rests in the hands of the profession, if they only knew it. Let every physician in the land use all his influence to induce students to attend those colleges whose curriculum is most advanced, whose terms are the longest, whose standard of excellence the highest, and we would soon find the best schools the most successful. Let every physician, too, discourage young men from enrolling themselves as students of medicine who have not a good preliminary education, and what a change for the better a single decade would witness.

Without such moral and material support on the part of the entire profession, we cannot expect those colleges whose professors are dependent for their bread and butter (whether directly from fees or indirectly from the personal advertisement thereby obtained) on the number of students in attendance, to make radical and advanced changes. Medical chairs should be endowed, as are professorships in literary colleges in this country, or as in the European universities. We must stir up our millionaires to the knowledge of the great good that can be accomplished by endowing medical professorships. Why is it that other educational departments come in for large shares of the rich man's legacies, and medicine is always forgotten? If a few of our large cities had within their precincts men enlisted in the cause of medical education, and with the capacity to raise funds for it, that our most efficient Chancellor (Wm. G. Eliot[1]) to the St. Louis Wash-

(1) Dr. Eliot, by individual exertions, has raised $1,000,000 for university educational purposes.

ington Univerity has manifested for it, there were then a bright day for medical education in this country.

As it is at present, medical teachers cannot afford to sacrifice themselves on the altar of an "advanced standard of medical education." And, therefore, while we earnestly hope for, yet we do not expect great things to be accomplished by the coming convention. S.

MISSOURI STATE MEDICAL ASSOCIATION.

We trust that members of the profession, very generally, are making preparations to attend the approaching meeting of the State Association. A few days' relaxation from professional cares and private business is beneficial to the individual, and companionship with medical brethren in the consideration of matters of common interest, enhances our love for the profession, increases our ability to practice it, and brings great good to it as a scientific organization.

We hope many are recording their brightest thoughts and working up their most instructive and interesting cases for contribution to the general fund of medical intelligence that will be given to the profession at the coming meeting of the Association.

It would be well if the titles of papers to be presented could be sent to every member, and given to the profession at large, two weeks previously to the time of meeting. It would increase the attendance, and gentlemen would come better prepared to enter into the discussions intelligently.

All resident physicians of the State, in regular standing, are entitled to membership, and yet is is hoped that local medical societies will, as far as practicable, send delegates. One of the means by which encouragement could be given to the organization and sustentation of local societies would be to limit the power of voting at the State Association to delegates only, this is the plan adopted in the National and in many of the State Associations. S.

LIQUORS PRESCRIBED BY PHYSICIANS AND SOLD BY DRUGGISTS.

From Jefferson City, under date of April 1st, comes the following:

The Gwyne bill, regulating the sale of liquors by druggists, was taken up and considered at length. The bill prohibits druggists of a less capital than $500 from the sale of liquors in any quantity, and by druggists of a larger capital, except upon a written prescription of a physician or the authority of a dram shop license.

Section 5 of the bill provides as follows:

Any physician, or pretended physician, who shall make or issue any prescription to any person for intoxicating liquors, in any quantity, or for any compound of which liquors shall form a part, to be used otherwise than for medical purposes, or who shall make or issue any prescription contrary to the true intent and meaning of this act, shall be deemed guilty of a misdemeanor, and upon conviction punished by a fine of not less than $40 nor more than $200.

Section 7 of the bill provides that every druggist in this State shall carefully preserve and file the presciptions for all intoxicating liquors sold by him under the provisions of this act, and shall file all such prescriptions in the office of the Clerk of the Court having jurisdiction of criminal causes within and for the county in which said drug store is situated, at least ten days before the first day of each term thereof, for the inspection of the Grand Jury hereafter impaneled in each county in this State. Any druggist who shall fail to comply with the provisions of this section shall be fined not less than $40 nor more than $100.

The bill was read a third time and passed—yeas, 87; nays, 39.

The St. Louis College of Pharmacy held its commencement exercises on the evening of the 18th of March, at Apollo Hall.

The degree of "Graduate in Pharmacy" was conferred by the President of the College, Mr. Chas. Bang, upon the successful sixteen, out of a senior class of twenty-two. J. M. Good, the professor in the class of Pharmacy, delivered the valedictory on the part of the faculty; that on behalf of the graduating class was delivered by E. M. Till.

The reception by the alumni followed, the recent graduates being admitted into the society by the President, Chas. Gietner.

This society confers certificates of proficiency upon those passing the best examinations in the different branches taught.

Edward Knoebel received the certificate for the best examination in Chemistry, John P. Schoenthaler, in Materia Medica, and Edward M. Till, in Pharmacy.

The number of students in attendance at this, the thirteenth annual course of lectures, was seventy; and we are glad to say the progress being made by this institution is quite gratifying to its friends.

CORRESPONDENCE.

PHILADELPHIA LETTER.

Mr. Editor: — The annual commencements of our medical schools, with the various matters connected therewith, furnish just now, a theme of considerable interest to the profession of this city and to the alumni of these institutions, wherever residing.

The commencement of Jefferson College took place at the Academy of Music last Tuesday, the number of graduates being 196, nine less than last year, but an enormous class. Of these, 87 were natives of other States (than Pennsylvania) or countries, 29 States of the Union being represented. Among the names of the graduates I observe one[1] very well known both in

1. Addinell Hewson, Jr.

this country and in England. No fewer than four members of this family have been distinguished as physicians. The first was an English surgeon of note during the last century, whose works were republished some time ago by the old Sydenham Society; his son was a very prominent physician of Philadelphia, and the grandson is now one of our well known surgeons. It is to be hoped that the young man who has just graduated will keep up the traditions of a family who have been honorably represented in medicine for more than a hundred years.

A feature of the commencement was the delivery of the valedictory oration by Prof. J. Aitkin Meigs, in the form of a poem. I believe this is unprecedented; the valedictory has certainly never before been cast in the poetical form at any medical commencement in Philadelphia. With regard to the subject-matter of the poem, the valedictorian, while making free use of allegory, kept close to the beaten track of general good advice to the students. One incident of the poem, however, was a glowing tribute to the Nestor of American surgeons, Prof. Gross, which was very warmly received by the audience. At this time, also, the venerable professor was presented with a laurel crown, and a public dinner is to be given him within a few days. There are few men in this country and in these degenerate days, when *nil admirari* is the cautious and universal motto, who command such warm and enthusiastic personal regard as Gross.

Of late years the award of prizes at the medical commencements has been a marked feature. Some $450 in money, together with two gold medals, were thus awarded at the Jefferson commencement, for general excellence of theses, for essays on various subjects, etc. It will be interesting to follow up these prize men, in order to observe if their early promise fulfills itself in their subsequent careers. At present, to have taken a prize is certainly helpful to the recent graduate, who aims at one of the minor positions in our hospitals and clinics, which are so eagerly sought after.

A month or so ago, the professor of Materia Medica in Jefferson College, Dr. Biddle, died, and for some weeks previous to the election for his successor an active canvass for the vacant position was carried on by numerous aspirants for the honors and emoluments of the chair, none of whom, however, had distinguished themselves in the branch which they desired to teach. The trustees have done a wise thing, under the cir-

cumstances, in going outside the city in order to get a man who should be not only a good teacher, but an original worker in therapeutics. Dr. Roberts Bartholow, of Cincinnati, has been chosen, and will in all probability accept the position. This choice on the part of the Jefferson College trustees gives general satisfaction to the friends of medical education within and without that institution, and although Dr. Bartholow's little eccentricities have been criticized here as freely as elsewhere, there seems a disposition to receive the distinguished therapeutist with a hearty welcome.

No further immediate alterations in the teaching and clinical staff of the Jefferson College and Hospital are contemplated, but it is no secret that certain changes must be made before long, and of these I may advise you in a subsequent letter.

The commencement of the University of Pennsylvania, which took place a few days after that of Jefferson College, excited an equal interest. The class numbered 91, of whom 23 were natives of other States and countries. In addition, the degree of Doctor of Dental Surgery was conferred upon twenty-five of the graduates of the new dental department of the University. A striking feature of the ceremony was the appearance for the first time, in Oxford caps and gowns, of the professors and members of the graduating class; the *tout ensemble* being picturesque to a degree, in comparison with the varied and informal costumes ordinarily displayed on these occasions. The valedictory address by Prof. John Ashurst, Jr., the occupant of the chair of clinical surgery, was a plain and straightforward address to the graduating class upon the duties of the profession which they were about to enter, and was characterized by its high tone and total absence of the buncombe and rhetorical flourishes which enter too largely into many addresses of this sort.

Though the number of students is not much larger this year than in former years, yet the quality is much improved. To any one who has watched the personal appearance and bearing of the successive classes at the University during past years, the improvement is very perceptible. The almost total disappear ance of the gray-haired farmer or mechanic who used to be seen on the benches, as well as the country boys who were formerly the despair of those who were endeavoring to educate them, points to a general improvement in students of medicine as

a class which it is gratifying for all friends of the university to note. It is said that the theses of this year were of uncommon merit. The facilities now offered by the University are very great, and especially with regard to the study of the various specialties. One of the features of the last session was the delivery of a course of didactic lectures on Dermatology by Prof. Duhring. These lectures were illustrated by drawings, pictures, and particularly by means of a small but comprehensive collection of beautiful wax models, belonging to Dr. George B. Wood. The accuracy of these wax models is wonderful, and for purposes of study, nothing more, short of actual life, could be desired.

The University recently came very near losing one of its most valued professors. Dr. Stillé resigned the chair of Practice which he has filled with great ability for the past twelve years. I believe Prof. Stillé had long cherished the resolution of resigning his position while still in the plenitude of his powers, in order that, unlike too many of his predecessors in the University, he should not "lag superfluous on the stage," to the detriment of his own brilliant reputation as well as to the injury of the institution. But the friends of the University were not willing to spare the professor, who may almost be said to be in the zenith of his powers, and he has been induced to reconsider and to withdraw his resignation.

What I have said about Prof. Stillé in relation to the professorship of Practice reminds me of his new work, "The American Dispensatory," which, written in conjunction with Prof. Maisch of the College of Pharmacy, has just issued from the press. It is designed upon the same plan as the well known "United States Dispensatory" of Wood and Bache, to which it may be said in some sort to be a rival. Its production has excited much interest, but I have not as yet heard or read any criticisms upon it. Prof. Harrison Allen, of the University, is engaged upon a large work on Anatomy, on the general plan of "Gray," but with a careful histological introduction and an abundance of entirely original illustrations. The appearance of this book is looked for with favorable anticipation throughout the city, both as being the first work of a scientific character in this department which has been produced here, and on account of the reputation of its author for painstaking thoroughness, accuracy of investigation, and originality.

Nothing of especial importance has transpired lately at the meetings of our medical societies. In a future letter I may give you an account of the work of some of these, and also of our medical libraries, which, formerly pre-eminent, are even now among the largest in the country, and in some respects I think unequalled excepting by the National Medical Library. X.

NEW YORK LETTER.

College Commencements—Changes in the Academy of Medicine—Improved Dwellings for the Poor—Low Death Rate, but no thanks to the filthy streets—Marriageable Youth should consult the Microscope before asking their Parents.

Mr. Editor :—The annual commencements of the three regular medical schools have just been held, and the degree of M. D. has been conferred on four hundred and sixty-five candidates. This number does not include the graduates from the Woman's Medical College, nor the Homœopathic and Eclectic Colleges. The University Medical College held its commencement on February 18th, the class numbering two hundred and five—within twenty-eight of half the number that graduated this spring. On the 27th ult., one hundred and sixty-five candidates, from Bellevue Hospital Medical College received licenses to practice medicine. It is rumored that this college will soon become the medical department of Cornell University. This would be of service to both institutions, and have a tendency toward graduating a better class of men. The last commencement was that of the College of Physicians and Surgeons, on the 28th of last month; the graduating class numbering ninety-five. The usual addresses were delivered to the graduating classes, in which good advice and counsel were given; mainly, a repetition of what is said at every annual commencement. If such large classes are graduated every year, the question will soon arise: How is each physician to secure even a moderate practice? And, in consequence, a great many good men will be crowded out. It has been said that the number of doctors and lunatics in the United States bear the same ratio to the total population, viz.: 1 in 600. I am afraid that, at the present rate of increase, the physicians will have the advantage in respect to numbers. A rigid public examination would, to a certain ex-

tent, remedy the existing evil, and the College of Physicians and Surgeons, of this city, has made a move in the proper direction. In 1859, the late Dr. Harsen founded three annual prizes for the best reports, by students of the College of Physicians and Surgeons, of the clinical instruction in the New York Hospital, during any four consecutive months in the year ending at the commencement, in which they are awarded. The prizes were, $150, $75 and $25, respectively. During the time that the hospital was closed, no prizes were given, and the fund has increased until the annual income now reaches the sum of over $1,500. It is proposed, in addition to giving prizes for the best hospital reports, to grant three more annual prizes for general proficiency of the values, $500, $300 and $200. The next thing to do is to establish a graded course, extending over a period of four years, and have one examining board for New York, the colleges being merely teaching bodies, and not having the power to grant degrees.

The Academy of Medicine will soon have its present building enlarged, a member of the profession having promised to give five thousand dollars for this purpose, provided the remaining sum, between two and three thousand dollars, necessary to carry out the project, should be raised by the Academy. Judging from the appearance of the subscription list, the amount will be forthcoming and the work finished by the middle of September next. When completed, the main hall will have a seating capacity of from 350 to 400. There will be an iron gallery around the inside of the building, on a level with the second story; on the sides of this there will be shelving sufficient to hold 33,000 volumes. At the present time there are upwards of 10,000 volumes, mainly collected since 1875. In the collection there is a nearly complete set of American medical journals, as well as of leading English periodicals, and a very large number of reports relating to health matters and kindred subjects, published by order of the English government.

The question of suitable dwellings for the poor is receiving a great deal of attention at present, and several meetings have been held to propose measures of relief. It is time that something should be done to make tenement-houses more agreeable to live in, both from a sanitary and a moral point of view. It is surprising how families of from six to nine persons live in such a small compass as they do; it often being the case that

this number live, eat and sleep in two small rooms. In the summer it is almost unbearable to one not accustomed to it. The average tenement-house in this city is generally five stories high, each floor containing eight rooms, and four families dwelling on a floor. Two of these houses—one fronting on the street and one behind—are generally built on an ordinary-sized lot, 25 feet by 100; between the houses are the water-closets. with their foul odors, and the clothes are dried on lines running across the yard, from the window of the front house to that of the rear. As there are clothes-lines running from each window in the house, it is plain to see that free ventilation is seriously interfered with. Prof. Chandler, President of the Board of Health, in the course of some remarks on this subject a few evenings ago, said that in the year 1878, sixty-nine per cent. of the deaths in this city occurred among the tenement-house population, and even this was an improvement on the condition of affairs as they existed previous to 1867. It was suggested by a prominent clergyman that stock companies should be formed to build larger and more commodious tenements, in accordance with sanitary principles, and that the stock should be placed so low that the poorer classes could become purchasers, and, to a certain extent, owners of their own dwellings.

Scarlet fever and diphtheria are not so prevalent as they were in the beginning of the year. It is a subject of remark that the death-rate is not much higher than it is, because of the extremely filthly condition of our streets, they not having been cleaned in nearly six months, although over $50,000 per month is appropriated for that purpose. The cleaning of the streets is under the sole control of the police department; if it were under the supervision of the health department, there might be a change in the condition of affairs.

In a paper lately read before one of the societies, and which has been published, the subject being, "The Aid which Medical Diagnosis Receives from Recent Discoveries in Microscopy," the following curious statement is made: "Marriage should be allowed in doubtful cases, only upon the permit of a reliable microscopist. Last season a young physician asked me whether I believed in marriage among kindred. He fell in love with his cousin, and so did the cousin with him. I examined his blood, and told him that he was a "nervous" man, passed sleepless nights, and had a moderately good constitution. The same con-

dition being suspected in the lady, marriage was not deemed advisable, for fear that the offspring might degenerate. So great was his faith in my assertions, that he gave up the idea of marrying his cousin, offering her the last chance, viz.: examination of her blood. This beautiful girl came to my laboratory, and, very much to my surprise, I found, upon examination of her blood, a first-class constitution. The next day I told the gentleman, 'You had better marry her.'" This paper illustrates to what an extreme a person may be led when he is desirous of arriving at a particular conclusion. I am afraid that if the services of the microscope were called in to assist in every case, in determining whether marriage should take place, there would be a great many more bachelors and old maids than there are now.

I suppose, before this letter reaches you, you will have heard of the death of Dr. J. M. Woodworth, Supervising Surgeon-General of the Marine Hospital service. His death will be a great loss to the profession. C.

New York, March 15, 1879.

QUININE AN OXYTOCIC (?)—SCARLET FEVER.

Mr. Editor: Your medical society has been debating the oxytocic properties of quinine. Now, I have been actively engaged in the practice of medicine for nearly forty years, and have given quinine freely to pregnant women during all that time, for attacks of remittent and intermittent fevers, and I cannot at present remember a single case of abortion which could be attributed to its use. On the contrary, I have seen several cases of abortion which occurred from the failure to use it in malarial fevers. My experience is that in most cases of pregnant women, if the fever is not arrested within a few days, abortion will result. To illustrate: A few years since I was called to see a lady in her fourth month of pregnancy, who had strong uterine pains; in fact matters had advanced so far that I found it useless to employ remedies to avoid an abortion, which actually occurred a short time after my arrival. She had been laboring under an attack of remittent fever for six days, with severe exacerbations every afternoon. The attending physician, fearing the oxytocic

effects of quinine, had withheld that remedy, and the result was abortion during the sixth exacerbation.

During the years 1844, 1845 and 1846, I was practicing in the very hotbed of malaria, on the Chariton river and its little tributaries. In the month of September, 1845, nearly all the doctors in our county being sick—at one time I was the only physician in the county who could mount his horse, consequently my practice was very extensive—I frequently visited over a hundred patients daily, besides prescribing for many others. For sixteen days during that time I dispensed from my saddle-bags daily an ounce of quinine. I suppose there were scores of pregnant women among my patients during those years, and I cannot at present recall a single case of abortion, which by any reasonable deduction could be ascribed to the use of quinine. What effect ten and twenty-grain doses might have in such cases, I am not prepared to say, as I am not in the habit of prescribing more than three grains, every two hours, unless there is some urgent necessity for speedy cinchonism. In one case of abortion related (Dr. Barret's), I think we can find ample reasons for an unfavorable termination, without laying the sin at the door of our *sheet anchor* in all cases of threatened abortion from malarial fever. If the fever is not arrested, the accident is almost sure to happen, sooner or later. If there are uterine pains present, no matter how slight, I think it important to combine pretty free doses of opium with the quinine.

We have had scarlet fever in our town and vicinity. Prof. F.'s son, sixteen years old, died with it. His was the third fatal case in my practice. I have no excuse to offer on my part for the unfavorable termination of his case. He was an uncommonly vigorous youth. I saw him shortly after he was taken sick, and every hour during the attack. He was faithfully nursed, and still he died on the fourth day from brain and throat affections. During the epidemic I have been able to make observations which may be of interest. They have reference to the period of incubation, and the stage of the disease at which patients are most liable to communicate the disease to others when exposed to the contagion. Some of our writers on the subject say that the period of desquamation is most favorable for spreading the contagion. During this epidemic, I am inclined to say that *contagion* was entirely *confined* to this period. We have had seven grave cases in and about this vicinity since it commenced, all

of which died before the period of desquamation. As far as I have been able to ascertain the facts, no one has contracted the disease from exposure to these cases. To most of these cases, others of very susceptible ages were fully exposed without contracting it. When the young man, in the case referred to above, was first taken, his parents did not suspect scarlet fever, as he was very subject to sore throat, consequently the other children —four of whom were younger than he—were not excluded from his room until after my first visit. When I saw him, his pulse was 140, and temperature 105° F., and he had been sick about twenty-four hours. The other children were in his room when I went there. Thus far all these so exposed have escaped.

H.'s daughter died during the first week. His other children were fully exposed during her entire illness. Some two months have now elapsed, and no other cases in the family have occurred. I only cite these two cases, but others were equally conclusive. As to the period of incubation, in most cases, when it could be definitely ascertained, about four days was the duration. I cannot say that I have learned anything of value as to the *treatment*, which is, by far, the most important part of the matter. Some of our physicians seem to attach great importance to certain remedies which they have been using, but my experience teaches me, that in grave cases they are entirely impotent, and mild cases recover just as soon without them. Though the confession is humiliating, yet I do not believe scarlet fever has been at all set back by the medical profession in Fayette. Some few days since I was called to see a little boy in the country with the disease. His was the ninth case in the family—all the others had been treated by the mother, who was a very ignorant German woman, and they seemed to be getting along finely—(she gave pepper tea and very small doses of quinine.) I told her to pursue the same treatment, with the addition of chlorate of potash, as a gargle. My confidence in specifics in scarlet fever is very weak. I tried the cold water in several grave cases without any benefit, except to allay restlessness. From an experience extending back nearly forty years, I am confirmed in the opinion that scarlet fever cannot be cured. We possess no specifics in its treatment. Mild cases will get well, if not disturbed by officious doctors and nurses; most grave cases terminate fatally, no matter what treatment is pursued.

Whilst the death-rate in our epidemic has not been large,

probably not over five per cent. in our immediate vicinity, still nearly every malignant case has ended in death. The mild cases treated with placibos only, have made as speedy recoveries, and been followed by as few unpleasant sequelæ, as those subjected to more active treatment. J. J. WATTS, M. D.

FAYETTE, Mo., March 20, 1879.

COMMUNICATIONS.

DR. ST. JOHN ROOSA'S PRESIDENTIAL ADDRESS BEFORE THE NEW YORK STATE MEDICAL SOCIETY.

Mr. Editor:—The past session of the N. Y. State Medical Society, at Albany, was of more than common interest. There was less ponderosity and more business than usual, besides a lively sprinkling of papers upon subjects in which we are all interested.

The President, Dr. St. John Roosa, delivered an address at the opening of the first night's session, on "The Relations of the Medical Profession to the State," presenting the subject under six heads:

First—As witnesses to aid in the detection of crime or the breaking up of nuisances. Under this head, the doctor dwelt upon the ridiculous contradictions in the testimony of medical experts, and proposed that the State should summon and pay experts, as well as allow them to act as associate judges to aid the case.

Second—As defendants in suits for malpractice. Here the remedy suggested for too frequent repetitions of suits by persons who chose to blackmail a physician, because of failure to succeed in a given case, was to be found in such an elevated tone of professional sentiment, as would awe the public into respect.

Third—As educators of the physicians of the future. Pointing out the many evils in the present system, Dr. R. insisted that a change was now imperatively demanded. I do not know of any subject which so much demands the attention of the profession at large, and the colleges in particular, as the regu-

lation of this question. Those who have courage enough to acknowledge it to themselves, cannot fail to see that the reputation of our colleges abroad is sinking from year to year. What may have been bettered by the introduction of lectures upon the various specialties and the replacing of antiquated fossils by younger men of more extended learning, is more than offset by the number of students rushing to the colleges. And why do they rush? Because there are no requirements as to preliminary education, because the time of study is short, and the expense not very great. Exact calculations are made as to how far the money will reach. This done, the whole course of study is mapped out in accordance with this factor. Specialties are neglected; histology crowded into a few lessons, at which the student learns absolutely nothing, because it is looked upon as unprofitable employment.

At the so-called "commencements" this year, there were thrown upon this defenceless world, by the colleges of our city, what one of my acquaintances called "well nigh unto a thousand doctors." Now, let it be remembered that more than two thirds of these had no preliminary education. Let it also be put down as a maxim, that it is fair to judge a person by the motives which prompt him to any deed. Then it will be found that the impelling power of the majority of these students was not love of science, but a well-calculated intention to to get into a profession of which they had heard that every member retires rich after so and so many years. Above all, however, is the desire to get a cheap title. To have the dear girls of your native town call you "Doc.," and no longer accost you by the name of Johnny, Jimmy or Andy, is a distinction coveted by day and dreamt of at night. And then, it does at once place you above your former friend and schoolmate, the mechanic or clerk, though the fact that you have to work harder, as physician, than do your friends, does not suggest itself.

All this was not said by Dr. Roosa; I add these well-known facts, which unfortunately few care to speak about openly What the doctor did say was, that there existed an equal necessity for lengthened terms and more rigorous examinations. Here we may allow ourselves to differ somewhat from the President. The winter and spring terms, together, are quite as long as those of colleges in Europe. The subjects, however, are not

properly divided, all the courses being brought on at once—from soup to cheese. Where there is stuffing, there will be constipation. Where a piling in of promiscuous facts, there will be a constipation of ideas.

More rigorous examination? Well, I thought all men, of any reasoning power, had by this time come to the conclusion that a powerful array of catch-questions is no test of a student's merit. I have likewise labored under the delusion, which is nevertheless a fact, that the smart boy who can recite the layers of a hernia, and give the insertions and attachments of the fifth layer of the muscles of the back, was a very amusing parrot, but gave no evidence of knowing anything. Up to date, I have lived happy in the partial conviction (upheld by statistics) that the valedictorian never rises above mediocrity in after-life. Now, I am opposed to having my idols destroyed, and to hearing any one insisting that answering questions glibly constitutes erudition instead of superficial memory.

But seriously speaking, the terms would be long enough and the examinations sharp enough, were the applicants properly prepared beforehand; if, in addition to what they should have learned at a university, they had grasped that most important factor, *how* to study. In short, the terms as well as the examinations would take care of themselves, if preliminary education was insisted upon.

The *fourth* head, under which our relations with the State were considered by the President was, "As managers of institutions for the care of the sick and injured." The point insisted upon, was the putting of physicians, in fair proportions, on the boards of erection and management of hospitals.

Fifth—As protectors of the community from quacks. The State has a duty to perform in protecting its citizens from quackery. Patent medicines should be excluded by law. The remedy suggested was the old one: A Board of Examiners from various colleges to examine into the qualifications of persons desirous of stuffing *materia medica* down the throats of a suffering public. Upon this subject, a volume might be written, but I abstain from boring you. It is the old story of whipping the devil around a stump. We did have Boards of Examiners; one for each "ism," from Dan to Bersheba, but thank God! they have gone to sleep. The moment Eclectics, Thompsonians, Beelzebubians and women, were each officially recognized by

the Legislature, in being permitted to have each its Board of Examiners, that moment the duty of the medical profession was plain. We ought to have crushed the thing by ignoring it, and by so doing, elevated our tone to a plane to which vermin could not creep. But no, it was tried and then abandoned.

The maudlin sentimentalism which would recognize every individual (I had nearly said scoundrel) who professes to have a desire to alleviate the sufferings of mankind, is a fault of our profession, a loop-hole through which all quacks endeavor to reach the little finger and then the hand of recognition.

Not by lowering our standard, not by *recognition* of quackery will we do the greatest good to the greatest number. Under no circumstances of life or fortune should a gentleman lower his standard of morality to suit circumstances. On the contrary, the more depressing the influences, the higher with the standard. And here we have even Dr. Roosa—*et tu Brute*—advocating the determining of a candidate, "not by the doses of drugs, but as to whether he be well grounded in the structure and functions of the human body."

Let us have no disgraceful compromises. No need to fight either. We silence to the death by ignoring a thing or a person.

The *sixth* clause referred to our position as sanitary advisers to the commonwealth, and treated of quarantine and the early tracing up of the sources of epidemics.

Instead of enumerating and dwelling upon some of the papers read by various sections, I find I have confined myself to the President's address. Both are somewhat *post festum*, though the subjects treated of in the address comprise all the nuts which the profession have been trying to crack for years.

New York, March 15, 1879. J. H. T.

THE METRIC SYSTEM.

Mr. Editor:—I beg to call your attention to an observation I have made in perusing the March number of the COURIER. Wherever a formula occurs, opposite the old figures I find an exact translation into the metric system, no doubt added with the view of impressing the practitioner with its clearness

and precision. But I am afraid that by this method he will fail to appreciate its simplicity. For instance, on page 303 I find:

R.		Gms.
Acid. Salicyl.,	ʒss.	2
Glycerinæ,	℥ii	62
Aq. Calcis,	℥viii.	249

In this and every other formula translated, the figures are in too irregular relation to each other, and no one will perceive by it the advantage the French system has over the old style; a very trifling change will give it quite a different look, thus:

R.		Gms.
Acid. Salicyl.,	ʒss.	2
Glycerinæ,	℥ii	60
Aq. Calcis,	℥viii	250

But this is not all: when you have brought over to the metric system the best men in the medical profession, half the object only will be attained; the main resistance will come from the druggists, unless the simplification goes even further than in the formula as above corrected. The apothecary will soon perceive that instead of translating one system into another, it is much less trouble to get the metric weights; now these are always decimal, half decimal, and double decimal, the sets of decimal weights being as follows:

0,001.— 0.002.— 0,005.
0,01.— 0,02.— 0,05.
0,10.— 0,20.— 0,50.
1,00.— 2,00.— 5,00.
10.00.— 20,00.— 50,00.
100,00.—200,00.—500,00.
1000.00.—etc.

Such being the case, a formula will be much easier to compound if its figures swerve as little as possible from the decimal, half decimal or double decimal proportions. To give an example, the above formula will be the most easily compounded if thus modified:

R.	Gms.
Acid. Salicyl.,	2
Glycerinæ,	50
Aq. Calcis,	250

Besides, it will more readily be retained by the physician, as it

reduces the whole theory to this: a 1-150th solution of Salicylic acid.

Of course I do not mean to say that in every case the formula ought to be forced in this shape, but it will be well to employ it wherever it can be made to correspond proportionally with the figures of the old style. Yours truly,

St. Louis, March 27, 1879. A. DERIVAUX, M. D.

REJOINDER TO DR. JOHN GREEN'S CRITICISM OF ARTICLE—"TRICHIASIS AND DISTICHIASIS."

Mr. Editor:—This month's COURIER OF MEDICINE has just been received, and I notice a criticism by John Green, M. D., of my article on Trichiasis and Distichiasis, published in your February number.

I regret that I am called upon, in consequence of the above, to pen for your useful journal a communication not strictly devoted to science; but the circumstances making an immediate reply eminently proper, impose upon me the distasteful task of writing a partially personal article, while they entail upon you the disagreeable duty of publishing it. Permit me to add, that were it not that the criticism must have met the eyes of many not familiar with the subject under discussion, it would not have merited a notice from me; for while its true animus, which must be apparent to the most casual peruser, is not what a liberal criticism should be, its weakness, is no less evident to the ophthalmologist or critical reader.

Starting out with a self-imposed task, *soi disant*, "In the interest of historical accuracy, and in justice to several authors living and dead," Dr. Green, in his very first effort, violates historical accuracy, and to all appearances does great injustice to Carter; while I, faring worse than either, it is insinuated am guilty of plagiarism; with how much *justice* the reader shall soon judge.

In order that I may be thoroughly accurate in not allowing a single assertion to escape my observation each receiving its appropriate answer, as we proceed, I shall consider, *seriatim*, every paragraph of this curious production. Italicised words and

sentences are my own, except where it is otherwise indicated by (*sic*).

(1). "The writer conveys the impression, possibly unintentionally, that recent authors have generally overlooked the existence of a true distichiasis as distinguised from the very common affection, trichiasis." Without entering into any discussion about my intentions, I will now quote an array of undoubtedly eminent authors, and let the reader judge to what extent it was superfluous for me to emphasize the differences between trichiasis and true distichiasis; or how absurd it was for me to define the position which I occupied on this embryo-pathological question.

The most recent text-book that I know of, bears the date of 1879, and its authors no lesser men than L. de Wecker and Ed. Landolt; title, "Traité Complet d'Ophthalmologie," published, Paris. I trust this is sufficiently eminent and recent to please even such a critic as ours. Under the head of "Trichiasis and Distichiasis," we find the following: "By *trichiasis* (*sic*) is understood a vicious direction of the cilia, in consequence of which they are turned towards the ocular globe, the lid being in no manner altered (from the normal condition). Whenever the deviated cilia are also in addition to this implanted in such a way that they distinctly form several rows, there is, *according to authors*, a distichiasis. This distinction is *not very important*, if we take into consideration that in the normal state the cilia are arranged in several linear rows," etc.; and farther on, under the head of Etiology: "Trichiasis and Distichiasis are *almost always caused by prolonged irritation* of the ciliary margin." See pp. 181-2. Beyond a doubt then, while these distinguished, recent authors consider the "distinction" between trichiasis and distichiasis as "not very important," they also believe that the latter can be caused by prolonged irritation, which, according to the views I take of it in common with some others, is impossible. Now although de Wecker is willing elsewhere to admit that distichiasis may be observed congenitally, yet he does not regard it as *per se* of embryonic origin, as I hold it is. That this may be confirmed, I will quote from his "Etudes Ophthalmologiques," cited by the critic authority against me on another subject. On page 698 the following occurs: "Trichiasis and distichiasis are almost always caused by prolonged irritation of the ciliary margin, and we will pass entirely over (*et nous*

négligeons entièrement), the *hypothesis* which supposes that a certain number of hair follicles, existing during fœtal life, and incompletely organized, are developed at the age of puberty; pursuing an analogous evolution to that of the teeth in certain beings, they grow in a vicious direction, giving rise to distichiasis (*Vidal de Cassis*)."

I next quote from the "Traité des Maladies des Yeux par X. Galezowski, Prof. Libre d'Ophthalmologie de l'École Pratique de la faculté de Paris," etc., 1875, p. 63. He says: "The cilia, assuming a vicious direction, may turn inwardly toward the globe of the eye and *constitute a morbid condition called trichiasis*" (*sic*). "*Distichiasis is but a variety of the same disease*—one row of the cilia preserve their normal direction, while another more internal is deviated inwardly." Can anything be more direct and conclusive than this denial of the existence of a true distichiasis, by a not entirely unknown ophthalmologist?

Haynes Walton, F. R. C. S., member of the Council of the Royal College of Surgeons, of England, etc., says in "A Practical Treatise on the Diseases of the Eye,"[1] p. 672: "Trichiasis signifies a misdirection of the cilia, or eyelashes, towards the globe of the eye, upon which they more or less rest;" and, p. 673: "The manner in which the more internal of the cilia may turn inwards either in a limited number in one or more places, or along the greater length of the eyelid, has induced some surgeons to *suppose* that there is actually a new production of an inner set of hairs, from follicles produced after birth, a supplemental development from a more internal part of the eyelid. The name of distichiasis has been given to this *ideal* state." "The supposed new row is a mere deception." "*I do not, therefore, recognize any such separate disease as distichiasis.*" Surely this is to the point, and forcible.

I. Soelberg Wells, 3d edition, Philadelphia, 1873. After describing trichiasis, he says: "In distichiasis there are two distinct rows of lashes, the outer being in the usual position, the inner being situated further back and turned inwards. The double arrangement is, however, often *only apparent*, being due to the thickening and stretching of the edge of the lid, and a consequent alteration in the direction of the hair bulbs and the cilia" "The most frequent causes of *these conditions* are long-continued and severe *inflammations* of the conjunctiva, and of

1 3d Edition, Philadelphia, 1875.

the edge of the lid in which the hair follicles have undergone inflammatory and suppurative changes," etc. No congenital distichiasis is spoken of by the author as far as I could find. Hence this author, who is *perhaps* known to some few, has "overlooked the existence of a true distichiasis," or at least ascribes the origin of the affection to an inflammatory cause, as in the case of trichiasis.

"A Manual of the Diseases of the Eye," by C. Macnamara, 2d edition, (the latest, I suppose, since I could get no other; it bears no date that I could find). "It occasionally happens that people are born with a double row of eyelashes; the inner ones, under these circumstances, are often inverted; the condition is known as distichiasis. I mention this *variety of trichiasis, not because it presents any special features*, but that the meaning of the term may be understood." Now, notwithstanding the author describes true distichiasis, he fails to "distinguish it sufficiently, if at all, from the very common affection, trichiasis."

Mackenzie, by Warlomont and Testelin, Paris, 1856. Having failed in getting any more recent edition of this work I, cannot state whether the authors have changed their ideas on this subject, but inasmuch as an older edition has been quoted against me, I also take the liberty of quoting it—page 297: "Trichiasis is a turning in of the cilia; distichiasis consists in the existence of a double row of cilia; the internal row, the one formed by the *pseudo-cilia*, (*sic.*), is directed invariably towards the globe of the eye. In reality, however, what we term *false-cilia* (*sic*) in distichiasis, though they grow from a region of the skin which habitually does not bear them, and that their direction is a vicious one, they are yet rarely, or *even never*, supernumerary productions. They simply consist of the normal cilia whose bulbs have been displaced by compression or a disease which has invaded the free margin of the lid." Comment is unnecessary.

Even Brudenell Carter, (as I must here reiterate I correctly stated in my article,) does not admit the existence of a true distichiasis, Dr. John Green to the contrary notwithstanding. The critic endeavors, unfairly, to convey the idea that I have, by cutting and mangling Carter's text, made him say what he did not intend: whereas the facts are that, on the contrary, I quoted fully, giving everything that Carter says on the subject, as can easily be verified; and

if his language means anything, he virtually states that he finds in many text-books a distinction made between trichiasis and distichiasis: but far from endorsing their views, he says that those authors "*assume* that there is a double row" of lashes; finally disposing of the subject by asserting that he *never saw* "what could be *properly described* as distichiasis; but that *he has* frequently seen some hypertrophy of the tarsal margins, attended by growth of cilia in abnormal numbers, some of them being misdirected." A pefectly fair inference from this is, that he intimates that the distichiasis of the text-books referred to was most probably nothing more than what he himself had seen and just described. Now let me ask, which of us is it who has attempted to misquote and misinterpret Carter?

But the would-be critic goes on to state, in the same paragraph, that I passed "over the brief though sufficiently exact notice of this affection by the American editor of Mr. Carter's book. This complacently takes for granted, that I had previously seen Dr. John Green's edition of Mr. Carter's book; a pardonable piece of vanity perhaps, but an error which truth compels me to correct. Having purchased Carter's own work (Macmillan & Co., London, 1875) immediately upon its appearance, it was not until quite a lapse of time (1877, I think,), that I accidentally learned that Dr. John Green had issued an American edition of the same work. Carter's eminent reputation being a sufficient guaranty for the excellence of his work, I never had the curiosity, nor did I deem it of such vital importance (as seems to be intimated by the critic) to look over the American edition; and but for this controversy, I would perhaps have continued in my benighted condition indefinitely. But I may add, that even had I been aware of Dr. Green's addition, or more correctly speaking, his contradiction of Carter's views, I would nevertheless have written just as I did. It was Carter that I was quoting for comment, not Dr. John Green, and inasmuch as there is nothing whatever in the preface which intimates that he was authorized to speak for, or to give expression to views, conflicting with those of Carter, he has not the slightest right to-day, of objecting to anything that may be said of Carter's work, which may be modified in the American edition.

Having thus quoted from seven prominent text-books, I find that I have exhausted the number of *recent authorities* known to me, in either the French or English languages (I do not read Ger-

man), else perhaps I would still be quoting *ad nauseam*, (as I fear I have already unnecessarily done,) without being able to add a single recruit to the scanty two, to whom my modest critic has so unostentatiously (?) added himself, the third and last in the column.

Now, if it was the intention of the critic to characterize my description of distichiasis as a plagiarism from either Schweigger, Stellwag or (last but by no means least) Dr. John Green, as to all appearances is covertly insinuated by his "unconciously perhaps" followed by a mark of interrogation, then I am forced to remark, however disagreeable the necessity may be, that the accusation is so weak, paltry and insignificant that it scarcely merits the notice here taken of it. A case seen and operated upon by myself (as can readily be proven) furnished the example for said accurate description, and as the condition agreed with what Schweigger, Stellwag and the critic had perhaps themselves seen, our descriptions of the identical, simple state, if accurate, must necessarily closely resemble each other.

(2). *Of the critic.* Here, by the dexterous clipping and disconnection of a fragment of a paragraph, quoted from my article, assisted by a very unfair suggestion of the critic, attempt is made to force me to say that I claimed that all of the methods which I spoke of as having employed (some of which I detailed), are the identical crude devices of a tyro, of twenty-two years ago, only casually referred to, *en passant*, that it might be seen how very early in my career, I felt the want of a feasible operation. By referring to THE COURIER OF MEDICINE, p. 125, the facts will be made clear. I there only speak of the procedures which I had *employed* (*not devised as my critic pretends I wrote*) before perfecting my electrolytic operation. If there be still a doubt on the mind of the reader, let him glance at the title of both of my articles on this subject: "Trichiasis and Distichiasis; with *an* (*one*) improved method for their radical treatment"—*St. Louis Clinical Record*, October, 1875. This effort at misconstruction, bolstered up with the statement that the self-imposed task, was purely undertaken "in the interest of historical accuracy, and in justice to several authors, living and dead," furnishes the excuse for an attack on my fair name, and a reputation for the possession of liberal medical information, beside giving a fine opportunity for a pyro-

technical display of pretended bibliographical knowledge, which we will later proceed to dissect a little.

(*a*) After what has been said, need I disclaim the invention of the galvano-cautery procedure, or, indeed, of any of the other methods spoken of as having been *adopted* or employed by me? I think not; hence, (*a*) (*b*) and (*c*) of the criticism, fall to the ground by one fell swoop. But I will now candidly state, that although I did not claim in my article, originality in the application of the nitrate-of-silver-tipped needle-points, nor the stitch (*b*) and (*c*) of critic), I was not aware that they had been applied—at least as I did—but the matter being one of such small moment, I never hunted it up; hence, was not aware, until now, that twenty-seven years ago Malgaigne had proposed to do with a probe, what I did later with minute *needle points*. Lest the casual observer may be led astray by Dr. Green's criticism, let me here assure him that no "probe dipped in liquid caustic potass" will give such results as those obtained from the nitrate of silver needle-points. Concerning this last procedure, which it now appears I unconsciously resurrected, and have reclaimed from oblivion, I will remark, that it is a little singular, that with so much to recommend it (its beautiful simplicity and eminently perfect results), it should not have received, at least, a passing notice in any ophthalmological text book that I ever saw (not even in the American edition of Carter) when so many inferior ones find place in them. Either the method was forgotten for want of a proper appreciation of it, or not being carried out as I proposed, it failed to give satisfaction. As regards the use of the stitch ((*c*) of critic), I was aware that extensive ligatures of the kind had been made use of, to change the direction of the entire lid in entropium, but not that it had been applied to minute points so as to affect individual cilia only. It was, however, only mentioned cursorily, that I might call attention to a slight, but useful modification, as I think, namely, its application as a seton, and not as a ligature.

Innocently guilty, as I have thus freely acknowledged myself, of unpardonable ignorance of Malgaigne's forgotten, and unappreciated suggestion, made twenty-seven years ago, I am nevertheless consoled by finding myself in such company (?) that Dr. John Green, at least, has no right to find fault with, for it is with no less a person than the well-informed, justice-loving

critic himself. In perusing the report of the Fifth International Ophthalmological Congress, held in New York, September, 1876, p. 126, I find that my critic, so learned in bibliography, was placed in a most unenviable position by reason of his having read before that Association a paper purporting to be a description of an original "Operation for Cicatricial Entropium and Trichiasis of the upper lid following Trachoma, based upon Von Ammon's Tarsotomia Horizontalis." After the reading of this paper, a member present, Dr. F. Buller, of Montreal, arose and stated that it had "been practiced by Von Burow very extensively. Von Burow has described his success with that operation, and states that he has operated one thousand times *exactly in that way*;" Dr. Buller adding, "I, myself, three years ago, had an opportunity of practicing that operation, and I have done it some dozen times." Dr. Smith then confirmed parts of Dr. Buller's statement, and said he himself had been for two years practicing the same operation. Dr. Green is not reported to have made any reply. Now, should not this immaculate critic have made some little allowance for what might have been ascribed to an honest oversight on my part; and if there was any occasion for stoning, he, at least, should not have been the man to cast the first stone.

We now come to the consideration of (*d*) of the criticism, referring to *my Electrolytic method*, which—Dr. John Green notwithstanding—I still do most unequivocally maintain is original with me until, at least, some more admissible testimony or plausible authority is produced to the contrary, when it will be time enough for me to acknowledge that I am mistaken. An honorable man should be ever ready to do so much cheerfully, but not more. Truly, I see nothing in (*d*) worthy of a serious reply. Such rambling, meaningless and indefinite assertions as it contains, is no answer to a positive and uncompromising claim. In the first place, the writer, notwithstanding his pretended acquaintance with the work of Bruns, confounds electro-cautery with electrolysis, whether from ignorance or design, I leave the reader to decide, but if he claims that he can quote Bruns for his mode of expressing himself, I will respond that Bruns, if he does (?) advance such a theory, would have too much common sense not to see the immeasurable difference in the practical application of these two distinct recognized principles. Galvanic cautery acts with uncontrollable lightning rapidity; whereas the

effects of electrolysis are as measurably under our control as the speed of an engine is. Then, without "rhyme or reason," he preposterously insinuates that I claim to have made discoveries concerning the special action of electrolysis on animal tissues, which, he says, can be found in Bruns (Tübingen, 1870), and I will add (to help him out) in the reports of Crusel or any good modern text-book. Finally, when the only important part of his paper is reached, he cooly tells us in a most vague and unsatisfactory way, that Himly, Jr., (Berlin, 1843.) and "other authors" *notice* the particular procedure advocated by myself; also, that it is attributed to Carron du Villards. A most definite statement indeed, especially as neither the title nor character of Himly's work is given, and neither character of works, titles nor names of the "other authors" are mentioned. Surely an American critic who has proven himself so inaccurate, and incapable of properly understanding the plain English of a writer of 1879, cannot be trusted for a correct rendition of a German author of 1843. Quotations in parallel columns would here have been invaluable, at least, to the reader, although, perhaps, it might not have suited the purpose of the critic as well.

I will here remark that I have been informed by a distinguished German ophthalmologist, who was a pupil of Reute, probably the most celebrated of Himly's disciples, that during his entire intimacy with his preceptor (Reute) he never even heard an allusion made to the use of electrolysis as applied to the treatment of trichiasis; nor did he ever know of its having been suggested, until informed of my method by Dr. A. E. Prince, of Jacksonville, Illinois. Græfe Sæmish, the Ziemssen of ophthalmology, does not anywhere hint at the use of electrolysis for the relief of trichiasis. Dr. Piffard, a dermatologist of eminence, the mention of whose name is sufficient to command attention and respect, with a generous candor worthy of the gentleman, stated at the second meeting of the American Dermatological Association, held at Saratoga Springs, August, 1878, that although he thought that he, himself, had employed electrolysis for the purpose of destroying hair papillæ and follicles, as early as Dr. Michel, "the latter certainly had the priority in publication." Hence, we here have the extraordinary spectacle of an absolutely silent modern literature of the four great nations of the world (England, France, Germany and America) on an operation of some importance; a host of well-

informed medical men, with no knowledge of the same, and finally two honest men (one of whom at least is well known for his high professional attainments (Dr. Piffard) who independently of each other, and possibly simultaneously, conceive the idea of a procedure, which both believe to be original, and is so announced without contradiction in an open session of a learned body of men (the American Dermatological Association), when suddenly an individual claiming to better informed than all of these, steps forward and announces the fact that he, alone, knows better, and in proof thereof, pens the loose, vague and desultory two and a half lines of the criticism.

(*e*) As the critic here fails to state, or even insinuate, that any one else ever used electrolysis subcutaneously, or otherwise, for the cure of trichiasis, no notice need be taken of his wild wanderings, unless it be to call attention to the fact, that while the authors spoken of as making use of a well-known principle to obtain the same result, are each given credit for his special method of producing the cicatrix, Dr. Green being particularly careful (and for the second time, in the same paper,) to modestly claim for himself "The neatest of all methods of applying the galvanic cautery for this purpose," immediately and untruly proclaims me a pilferer of other men's ideas, when I mention a method which involves the use of an entirely different agent from any of those cited, the effect of which, moreover, besides being entirely subcutaneous, can be graduated to a nicety, at the pleasure of the operator.

(3) After the foregoing exposures, this paragraph needs no answer.

(*f*) So according to this wise critic's dictum, I have "entirely misconceived" a most simple description of a trifling operation, and my criticism of it, we are told, "wholly irrelevant;" perhaps? in *the* opinion of the critic, which will be rendered the more probable after reading further on his intelligent writings on the subject. If the reader will only refer to the paragraph in question, and at the 28th line, page 129, of the COURIER OF MEDICINE, simply substitute the word eyelash for "thread," (a glaring *lapsus calami*,) then read what Dr. Green says below concerning this operation, he will soon see which of us construes or understands the English language better. Wishing to be enlightened, and following the critic's implied advice, I have consulted his report on ophthalmology in the St. Louis *Med-*

ical and Surgical Journal for November, 1871, but unfortunately for him, I am truthfully unable to say that that production does him credit, either personally or scientifically. In that report, speaking of his experience with this same Celsian operation, he remarks: "A few weeks always sufficed to bring forth deviated lashes in the place of those *transplanted*," etc. The transplanting of cilia is certainly a most novel idea; its invention most assuredly belongs to the reporter, not Celsus,—either the import of the English word transplant or the operation itself is here "misconceived" by the writer. It is not now surprising to myself nor any one else, I ween, that Dr. Green imagines that I "entirely misconceive" Celsus' operation. In this same report Dr. John Green quotes from a paper of Snellen's, as follows: "In partial trichiasis where only single cilia are turned inward against the eye, *we have attempted* to restore them to their normal direction (*repositi ciliorum*) *sic.* We have succeeded perfectly in this by using &c., &c." Here follows a most accurate description of the ordinary Celsian operation. Dr. Green apparently criticising one Dr. Schulek, adds: "Dr. Schulek *seems* to have recently heard of this plan, *as suggested by Snellen*," &c., &c. Now Mr. Editor, "in the interest of historical accuracy, and in justice" (not injustice) to the dead, I also, ask permission to correct, although seven years have elapsed since the above was written. The operation described belongs to antiquity and is ascribed to Celsus. Snellen, no doubt, did not intentionally claim originality in the method, as his words (if properly quoted) would probably intimate he had; but Dr. Green speaking of it, says that *it is a method suggested by Snellen*; whereas, now, in his criticism of my article, he is forced to change his language, and to speak of it only as "revived in recent times by Snellen," not "suggested" or invented by Snellen. What this change of front means, may perhaps be made clearer in a few moments. So it appears from the record that when Snellen is concerned, Dr. Green, from some hidden cause, not only fails to attack his apparent claim to an operation not his own, but actually strengthens it by a positive confirmatory assertion of his right to it; but Michel's simple remark, that he had employed certain methods, conjures a violent storm from this singularly consistent critic. Let us for a moment analyze the above facts: When Dr. Green wrote in 1871, he must have known, or not known, the true origin of the Celsian operation;

if he did know its origin, he affirmed to be true that which was not correct. If he was ignorant of who its author was, then his apparent wonderful bibliographical knowledge has suddenly and very opportunely (?) come to him of late. But if he claims that he did not assert that Snellen was the author of the said operation, then he fails to appreciate the fact that he does not express himself correctly—in the English language, at least—for others understand the word "suggest" to signify much more than he does.

(*g*) *Of criticism.* In answer to this paragraph, I will only say that my authority for the statement that Galezowski was the originator of the operation mentioned, is X. Galezowski, himself, and I beg to refer the reader to his "*Traite des Maladies des Yeux*," Paris, 1875, p. 86, where, what I assert can be verified, and an illustrating cut of the operation seen, with these words affixed: "*Procédé de L'Auteur*," I leave Galezowski to the tender mercies and just criticisms of Dr. Green, or *vice versa*.

Finally, and in conclusion: That Dr. Green's ideas of pathology and rational treatment of trichiasis, "differ widely" from my own, as he claims, does not disturb me in the least; I was prepared to hear as much, judging from this, my first experience with him; and unless those ideas are based upon more secure foundations than his criticisms, justice or historical accuracy, they most assuredly would not repay for the time consumed in their perusal. Yours, truly,

CHAS. E. MICHEL, M. D.

1405 Pine St., St. Louis, March 18, 1879.

SPECIALISTS AND SPECIALISMS.

Mr. Editor: As your editorial in the March number of the COURIER seems to reflect injuriously upon a body of gentlemen pursuing the special practice of medicine, I take the liberty of replying, disagreeing with you on some points, and giving what would seem to be a more correct statement of the relations existing between specialists and their brethren.

The word "specialist" is most unfortunate, for it is only a few years ago that it was solely applied to charlatans and empirics in medicine.

The public still makes little distinction between the regularly educated physician and the charlatan; but is it true, that there are still physicians who consider the term in its original meaning and confound the two and their practices?

We are not specialists, but physicians, practicing a special branch of medicine, and we most energetically protest against being read out of the Medical Association because we choose to confine our practice to a single branch. We are known, however by that name and have to accept it.

In this communication, I shall speak solely for two classes of specialists, without reference to others bearing the same names.

1. Men who, after a lapse of years, either through choice or the force of circumstances, find themselves gradually drifting into a special line of practice, until at last general practice is entirely discarded, and they are thenceforth known by reputations achieved in special work. In this class are some of our most distinguished names in medicine.

2. Men who have started out in their professional career with the purpose of devoting themselves to a special department of medicine, who after having received their medical education, spend additional years in fitting themselves for their chosen branch of practice.

I shall exclude a class of men who may be called "reformed irregulars"—men who formerly were advertisers, using newspapers and placards on fences as mediums for extolling their marvellous skill and treatment, but who, having accomplished their object, have withdrawn their notices, and knocking at the doors of local medical societies have been forgiven and admitted. The reformed specialist will always be open to suspicion, lest under temptation the sins of youth may be revived—for a stain on the honor of a physician, like a tarnish on the modesty of woman, leaves an impression that can never be effaced.

You claim, Mr. Editor, that specialists violate the Code of Ethics of the American Medical Association. According to the *words* of the Code, they may do it; but the *spirit* of the Code is held inviolate equally by the honorable specialist, as by the honorable general practitioner. The Code of Ethics inculcates a spirit of honor and fair-dealing among physicians: it does not pretend to mention every means by which this can be accomplished: it presumes its members are honorable men, and that they have a mentor in their own consciences.

You stigmatize the man who has not read the Code. I stigmatize him who needs the Code. A physician who needs a set of rules and regulations to govern his conduct, should be placed under the ban, and those that consort with him after his misdeeds are known, render themselves amenable to the same punishment. Ostracism to a physician who has performed a dishonorable act would be a much greater safeguard to the purity of the profession, than a limitless number of sections and articles.

Now let us see if specialists do violate the spirit of Art. 5, Sec. 4 of the Code. It says, "that a physician ought not to take charge of, or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired."

You consider it a violation, that a specialist should receive a patient visiting his office who has been under the charge of another physician, unless the physician has been duly notified.

The Code says, "when the latter has relinquished the case, or been regularly notified that his services are no longer required." This clause can be construed according to the rules of equity or of law. The letter of the law says a regular notification must precede any action of the latest attendant. Now the question arises, what is a regular notification? Must it be a written or a verbal one? Or will the *action* and will of the patient be accepted as such notification?

Perhaps this may not be according to the strict letter of the law, but is it not in the spirit of equity?—and law should be governed by equity.

Is the Code a rigid, inflexible law, to be construed according to the strict definition of words, or is it rather a flexible one, that may be readily adapted to the exigencies of cases?

We must consider here the relations existing between the patient and the specialist, as well as the relations of the patient to his family physician. The patient is not dissatisfied with his attendant as a family physician, and does not wish to discharge him from his family practice, but simply prefers the services of a "one branch man" in dealing with this special attack. The fact of his coming to the office of the specialist is equivalent to

a discharge of his former attendant during that illness. Under the circumstances the *act* becomes a notification.

In regard to house visits it is entirely different, for here the specialist enters the domain of the family attendant. I must protest against the statement of the facts under these circumstances. No specialist of any reputation will *see* a case at a house, whilst another physician is in attendance, unless it be a case of emergency, until the former attendant has been notified, either verbally or by written communication.

Let us reverse the picture. How often is section 4 of the Code, in the literal meaning of the words, strictly followed by the general practitioner in regard to office visits? Suppose a patient who is under the treatment of a specialist becomes dissatisfied. He shows his dissatisfaction by ceasing his visits to the office. Suppose he seeks advice from his family physician, or any other physician, does he consider it necessary, in presumed accordance with the Code, to refuse to prescribe for the patient until the specialist shall have received a written or verbal notification of the change? I doubt whether such an idea ever occurs to him—if it does, he certainly never puts it in practice. He considers, if he gives it a thought, that the action of the patient in absenting himself from the office of the specialist is equivalent to his discharge. Should he, however, interpret the Code according to your views, Mr. Editor, he nevertheless receives the patient, and, this can only be explained by the presumption, that he considers that the specialist has no rights which the general practitioner is bound to respect.

Is it fair or just that the odium of breaking the Code should be laid at the door of a small number of men who are specialists, when they certainly act towards their brother practitioners as their brother practitioners act towards them? As all general practitioners, belonging to medical societies, are presumed to be guided by the Code, and as they all show their interpretation of it by acting in this manner, must not this interpretation be correct? Would it not be well, Mr. Editor, to be sure that our own houses are thoroughly in order before criticising defects in those of our neighbors.

It is unfortunately true that there is, as you say, a certain amount of prejudice against specialists in the profession. Many still believe, as the venerable Nestor mentioned by you remarked, "that the results to patients are no better than when he,

with comprehensive views, did the best he knew for all." Many hold this opinion honestly, for they cannot appreciate the details of special practice, and cannot bring themselves to believe that men young enough, perhaps, to be their sons, are more competent to treat certain cases than they, who have had a life-long experience.

Again, their views may be founded on the experience of some incurable lesion, which they for months or years have vainly tried to remedy, and which in despair, they at last send to a specialist—only to hear the result—*a large bill and no improvement.*

But, Mr. Editor, I know that you are in error in ascribing to the Nestors of the profession a feeling of hostility to specialism. On the contrary, it is to them that it owes its most earnest support and encouragement. It is in a few of the younger generation that it finds its most determined antagonists. Is it not possible that the same self-confidence with which you charge specialists may be more justly laid at the door of their opponents?

After all, the prejudice is not so much against specialism as it is against men, who, calling themselves specialists, still do not confine their practice in its legitimate sphere—men who are specialists or general practitioners, as the occasion demands.

There should be no antagonism between specialism and general medicine; they mutually support and assist each other. The general practitioner has the specialist to call on, when he meets with a case which baffles his knowledge, or which is tedious to treat. He saves his reputation by avoiding failure, or if failure comes, by throwing it on the shoulders of the specialist. The specialist is indebted to the general practitioner for good will; for many cases will not think of consulting a specialist until he has the endorsement of the family physician.

Why is it, Mr. Editor, that there is this "deluge of specialists on the land?" Is it not the spirit of the age? Looking into other occupations and professions, do we not see the same? In manufactures, the individual fashions but a small part of a given article; to attain its perfect form it passes through many hands. The old adage of "practice makes perfect," is applied, and the general belief is, that the oftener a thing is done the better it will be done.

In law, we find different divisions strongly marked; the criminal lawyer does not undertake civil suits, nor the "land" lawyer insurance matters—division of labor is strictly recognized.

If this is so in the mechanical handicrafts, and in the written problems of jurisprudence, how much more necessary is it in the science of medicine, still enveloped in so much mystery and uncertainty.

The people demand specialties. They will consult, at times, an unknown man, a mere adventurer, who calls himself a specialist, rather than their tried and honored physician. The physician of twenty years ago is not the physician of to-day. The pedestal which he occupied in the family has been overthrown. He is no longer looked upon as the confidential friend and adviser, as well as the medical attendant. Instead of this, we find the family constantly changing their medical attendant, the different members having their own physicians, and too often do we find the children monopolized by our irregular brethren, the homœopaths.

In short, the sentimental part of the practice of medicine is being rapidly done away with.

People consider their relations with their physician as simply matters of business. They come to him to relieve their ills, as they go to a lawyer to save their property. When the bill is paid—and too often it is not—they consider that they have done their full duty; feelings of gratitude and friendship have little part in the transaction. It is purely and simply a business transaction.

With such a spirit prevailing, is it strange that they give up the old friend and counselor, to take up a new man, of whom they know nothing, except that he has been successful in the case of a friend?

You ask, where will all this division into specialties end? Are we all to become specialists? I believe not, Mr. Editor, for there is not room in a single field but for a certain number. I believe the remedy lies in a more thorough education. The physician of to-day should learn enough of the various specialties to diagnose and treat his cases in the same manner that a specialist does. He may not do it as well, as he cannot have the same practice as the successful specialist, but he can inform and train himself sufficiently to treat properly a large majority of the cases that now fall into the hands of the specialist.

When people find that their family physician treats such cases with equal success as the specialist, then the pendulum will swing backwards; economy and business principles will

prompt them to call on the man they know, for relief, and specialism will be confined to a comparatively few, eminent men whose talents have raised them above the common crowd.

W. C. G.

BOOK REVIEWS AND NOTICES.

BOOK REVIEWS.

PHYSIOLOGY: PRELIMINARY COURSE LECTURES. BY JAMES T. WHITTAKER, M. A., M. D., Prof. of Physiology and Clinical Medicine in the Medical College of Ohio, etc., etc. *Cincinnati: Chancy R. Murry*, 1879. 8 vo., pp. xii—288.

The contents of this book are twelve lectures held in a course preliminary to the regular work of the winter session. The subjects chosen are eminently appropriate to such a course, and elaborated in a proper spirit; they represent some of the fundamental principles, not only of physiology, but of biology, as well. The publication of these lectures is a matter of congratulation, therefore, to the author's pupils, and they furnish good reading also to the general reader interested in the science of life. They cover a wide range of subjects, such as the influence of physiology upon practice, the conservation of force, the origin of life, evolution, protoplasm, as well as a few fundamental chapters in special physiology—and, therefore, scarcely call for review; while criticism as to the manner of execution is disarmed at once by the author's explanation, that in publishing them he has adhered strictly to the spirit and almost the letter of the delivery. The subjects mentioned, especially the more general topics, are treated very agreeably, feuilleton-like, and every right-minded student will be not only entertained, but instructed by reading them.

Certain it is, that they deserved a more careful editorial revision than they received. We not only find typographical (*e. g.* Thack*e*ry, p. 16) and other errors (the headings *Grammes* and *Grains*, p. 186, confounded), but also instances of very loose statements, (as "ergot and its active principle." p. 14; or the sentence on p. 41, "we have as the result of life precisely the same oxidation products [excretions] from these compounds as after more direct combustion"), blunders in grammar (*e. g.*

"cases of this · · · *has* been put on record, p. 164,) and instances of a slipshod style generally, such as answering (p. 17) the question, "*what* is it," with "it is *because*;—all of which is to be regretted.

G. B.

NAVAL HYGIENE: Human Health and the Means of Preventing Disease, with Illustrative Incidents, principally derived from Naval Experience. By JOSEPH WILSON, M. D., Medical Director U. S. Navy. 2d edition. Illustrated with Wood Cuts and Colored Lithographs. *Philadelphia: Lindsay & Blakeston*, 1879. 8vo., pp. 274. Price, $3.00.

Quite a readable book, and not strictly technical, nor too abstruse, as it was not intended exclusively for the professional reader, but was written with the hope that captains of ships and others, who are so situated that their conduct may have great influence in the preservation of human health, would be able to understand the simple principles of hygiene and apply them. "It is but a contribution to general hygiene, with some of its illustrations drawn from incidents of naval experience.

With correct ideas of his subject, the author has done well. We hail with gladness every effort that is put forth in the direction of preventing disease, and therefore we bespeak a welcome for this work. It is a narrative, thread-like, running through and connecting the different chapters, in which the various and important topics are dwelt and fully enlarged upon.

In 1860 Dr. Wilson sailed from the Philadelphia navy yard as surgeon on a government steam-frigate, which cruised in the Gulf of Mexico and on the northern coast of South America, with 299 men, and was in commission 438 days. While it was not an eventful cruise, still much was made of the opportunities presented, for explaining and insisting upon hygienic laws, as affecting especially the health of seamen.

The outfit of the ship, the ventilation, drainage, sea sickness, nostalgia, clothing, food, drinks, morale, discipline, quarantine, epidemic and contagious diseases, etc., all receive full and intelligent consideration.

Our author is not a strong believer in quarantine. He says, p. 166: "Much of the legislation on the subject is founded on the ignorant prejudices of persons who imagine epidemic diseases to originate and to be propagated by contagion only, and it has inflicted a great deal of mischief and cruel suffering. The city of London has escaped great epidemics of the plague for

two centuries, not through the influence of quarantines, but of a great fire which destroyed a large portion of the city and enabled the authorities to have it rebuilt in a more healthy style. New Orleans escaped yellow fever while intelligent military authorities carried out rational sanitary measures. Baltimore and the cities north of it have escaped the same disease for half a century, because they are so abundantly supplied with river-water that streams of it are constantly running to waste through all the drains and sewers. We would not do away with all sanitary measures in reference to a vessel entering a port, but there should be abundant discretion allowed to intelligent, well-educated officers, in order that passengers need not be subjected to disease and death by senseless cruelty, or commerce to absurd and destructive restrictions. Persons, whether from distant cities or not, who have recently recovered from contagious diseases, should not enter a house occupied by other persons without due precaution. Their clothing and bedding should be thoroughly disinfected, not under the direction of ignorant prejudice, but of intelligent, well-educated persons."

Again (p. 197), "In regard to the quarantine of yellow fever, we may safely say that all the restraints which prevent the sick from reaching a healthy locality are absurd, and with our present knowledge on the subject, outrageously cruel, little better than deliberate murder. A yellow fever patient, even carrying his clothing and bedding with him, has never been known to communicate the disease to another person in a *healthy locality*, and the experiment has been tried thousands of times. To prevent yellow fever on board ship, we must practice those measures which are required to prevent such diseases generally; cleanliness, purity, ventilation, good food, and cheerful, social influences, are the necessary means. The universal prophylactic is purity, material and moral purity, personal and social purity, at home and abroad, by night and by day, of air and water, in all places and at all times, *purity*. If circumstances prevent a person from leaving a place when the yellow fever prevails, he should select his residence in the highest and healthiest available spot, should sleep preferably in the highest part of the house, avoid the night air, using mosquito bars rather than nothing, for its exclusion, use nutritious and wholesome food, avoid fatiguing exercise, exposure to the sun, and excesses of all kinds; maintain a cheerful, confident temper, for which a clear

conscience, and earnest Christian feeling, the baptism of the Holy Spirit, appear to be the most essential circumstances. If it be necessary to enter an infected spot, go in the day-time and do not stay long. Attempts to guard against the disease by low diet and physic are worse than useless, as they enfeeble the system and render it less able to resist the action of the poison."

"Yellow fever is the disease (p. 214) in which acclimation is most important and most readily appreciated. It rarely affects the same person more than once; children are not so severely affected, and rarely die; hence the adult natives are usually exempt. They do not suffer except in great epidemics; they consider the place quite healthy when strangers are dying in large numbers or flying for their lives; they call it *stranger's fever*. This characteristic of the disease is, unfortunately, often lost sight of, as in the epidemic at Norfolk, in 1855, when medical students and nurses, quite unprotected, were encouraged to go to the afflicted city to do the work of nurses, and the consequence was just what might have been expected—they quickly sickened and died, thus making more work for the nurses and grave-diggers, instead of helping. The same blunder, on a small scale, was repeated at Pensacola, in 1874. There is no scarcity of acclimated persons in southern cities, and they should do this duty."

"The cause and nature of epidemic influence (of diseases, p. 179), is quite unknown, * * * certainly they (epidemics) mostly result, more or less directly, from violation of God's known laws. When we seek for the instruments of His will in this matter, we get into a labyrinth of guesses, and ingenious and plausible theories, in which hydrocarbons, fermentations, organic germs, microscopic animalcules and cryptogamic vegetations are made prominently to figure. They nearly all refer to impurities or distemperatures of the atmosphere.

"The plague has been traced to crowding, privation, and want of cleanliness in the old fortified cities. Quite recently, in India, a terrible destruction of life was traced to the building of canals for internal navigation, and in our own country these epidemics are found to coincide with similar public works. Terrific epidemics are traceable to a manageable cause."

We have given thus much of our author as being both instructive and illustrative. The book is one physicians could

have on their tables from which to read a chapter at odd times, or to throw into the portmanteau to read on the cars or boat.

Thirty-seven pages are devoted to the consideration of botanical plants, etc., that might well be omitted as being out of place. One would never think of consulting a small work on hygiene for a description of the Scrophulariaceæ—*Mullien Family*—or the Euphorbiaceæ—Spruges. The practical part of the whole subject could be simplified and condensed into five pages. Otherwise we must express our gratification and commendation of the work.

A. J. S.

On Rest and Pain: A Course of Lectures on the Influence of Mechanical and Physiological Rest in the Treatment of Accidents and Surgical Diseases, and the Diagnostic Value of Pain. Delivered at the College of Surgeons of England, in the Years 1860, 1861 and 1862. By John Hilton, F. R. S., F. R. C. S. Edited by W. H. A. Jacobson, F. R. C. S., Assistant Surgeon to Guy's Hospital. Second Edition; with 109 Illustrations. New York: *William Wood & Company*, 27 *Great Jones Street*. 1879. 8 vo., pp., xii—300.

The publishers have done well in giving to the profession of America a reprint of the second edition of Mr. Hilton's classical work, and, too, in furnishing it in so acceptable a shape and at such an extremely low price. This, the second edition, is not materially changed from the first; it could not well be; for the principles early enunciated were founded on fact, and capable of positive demonstration. It is in such fields as our author cultivates, that we find evidence of the fact that medicine is largely a science, containing much that can be proven. Mr. Hilton must certainly have been a close student of John Hunter, so thorough is his observation of facts, and so correct his solutions of numerous problems which ever present themselves in surgery. He found nature employing a powerful and efficient therapeutic agent in rest as a "fosterer of repair," and readily concluded that to imitate her were wisdom on the part of the doctor. If rest is necessary for the healthy action of any organ —that is to say, for its physiological well-being—then it certainly finds application in pathological repair. To illustrate this truth and indicate where it will best find application, is essayed in these lectures.

To illustrate also the significance of pain, both as a diagnostic help and as a therapeutic indication, is clearly taught in the work before us.

In bone and joint diseases these two influences, rest and pain, find large application; however, Mr. Hilton has very far from confined himself to these affections, but includes diseases of every tissue that may illustrate the principle enunciated.

Many of the facts in regard to, and many illustrations of the distribution of the nerves are especially important in regional anatomy, and thus, to the advanced student, they are of great interest. Mr. Jacobson, the editor, says that experience in the dissecting room has taught him that such a book might be pre-eminently useful to students, by proving to them, when engaged in the earlier drudgery of dissecting, how useful the dry facts of anatomy will surely be hereafter; and later on, by encouraging them to keep up their knowledge of anatomy by applying to their practice the thoughtful lessons so clearly enunciated by Mr. Hilton.

In this edition many foot-notes have been added by the editor, making plainer the text and giving the latest and additional views on many passages.

We cannot even enumerate the subjects explained and illustrated; but to furnish an idea of the practical character of the work, and to show the practical application of anatomical facts to a correct understanding of pathological processes and therapeutical indications, we will refer to a paragraph (which may be taken as a specimen of the meat that is to be found throughout the whole work), p, 47, on pain over the stomach, in the region of the cutaneous distribution of the sixth and seventh dorsal nerves, as a sign of vertebral disease. "Disease of the spine may begin in the vertebræ or in the intervertebral substance." * * * "The pain associated with diseased spine, to which I now refer, is found upon the skin, supplied by nerves which escape from the vertebral canal through the intervertebral foramina, close to the bones or intervertebral substances, either of which may be the seat of the disease. It is upon the recognition and right interpretation of the cause of this pain upon the surface of the body, that we ought to place the best prospect of early and correct diagnosis in spinal disease[1].

1 Dr. Benjamin Lee was the first in this country to call attention to this symptom of spinal disease, which he designated Initial Gastralgia.—*American Medical Times*, July 15, 1864. Mr. Hilton had already reported in the *Lancet*, the fact, as early as 1860.

"The sixth and seventh dorsal nerves are distributed to the skin just over the pit of the stomach. If pain be felt at that part alike on both sides of the median line, these nerves becomes the only possible expression of that cause, for there is no other structure there situated which could manifest the pain. By, then, tracing the nerves producing these surface-pains backwards to the posterior median line, and noting accurately the healthy or unhealthy condition of the various structures near which these intercostal nerves would pass—such as the ribs, pleuræ, aorta, œsophagus, and other structures in the poterior mediastinum,—we arrive at the vertebra and spinal marrow, and in that way, proceeding by the law of exclusion, we arrive at the diseased spine as the real cause of the pains experienced at the pit of the stomach.

"I would now point to the application of this method in practice, as illustrated by a case which I saw in 1851. On the 18th of March of that year, Mr. Ray, of Dulwich, brought me a boy, eight years of age, who had been suffering from pain during January and February, 1851, just above the pit of the stomach, and who used to walk about with his hands placed over that region, with the body a little inclined forwards, as if suffering from some irritation or pain of the abdominal organs, in which direction the treatment had hitherto been applied, but without much benefit. It was noticed that the pain increased during the maintenance of the erect posture, and that it was relieved by the recumbent position. The child was old enough to express a little of what he felt, and when asked where the pain was, he put both hands over the stomach, where he had previously complained of pain, and we observed that the pain was expressed on both sides alike. Mr. Ray and myself agreed that it was over the peripheral distribution of the sixth or seventh dorsal nerves. I requested that he should be undressed, so that we might be able to examine his spine. We then found that there was disease, with slight displacement, between the sixth and seventh dorsal vertebræ, and pressure upon these vertebræ produced the pain in front. The child could give us no explanation of the symptoms. No known accident had occurred; but the seat of the pain was marked by his placing both his hands in the position which I have described. The real cause of this patient's symptoms was now apparent, and by putting the boy upon a hair mattress on his back—that is,

by giving the spine rest—during four or five months, he got quite well, without any local application to the spine. The improvement began immediately on lying down, and it was steady and permanent. He only took some cod-liver oil. Since then he has had no return of his symptoms, and is now grown up a healthy lad.

"In this case, when we traced the dorsal spinal nerves backwards, or centripetally, we immediately arrived at the cause, and having recognized it, there was no difficulty about the treatment. In March, 1860, Mr. Ray reported to me: He is now seventeen years old, is strong, in good health, has not any deformity, and has not had any recurrence of his former symptoms.

"I mention this case for the purpose of showing that lapse of time and the accidental casualties of life have not induced the reappearance of the disease, and of displaying how much useful information we may obtain in practice by a precise examination of the exact seat of pain under these circumstances."

We would recommend every student and practitioner to obtain and thoughtfully peruse this work. A. J. S.

THE EAR; ITS ANATOMY, PHYSIOLOGY AND DISEASES. A Practical Treatise for the use of Medical Students and Practitioners. BY CHARLES H. BURNETT, A. M., M. D. Aural Surgeon to the Presbyterian Hospital; Surgeon in Charge of the Infirmary for Diseases of the Ear, Philadelphia; with 87 Illustrations. 8 vo., pp. 615. Price $4.50. *Philadelphia: Henry C. Lea*, 1877. (St. Louis Book and News Company.)

The publisher has placed in our hands this work of Dr. Burnett's, which, notwithstanding it has been before the professional public for something more than a year, and has been reviewed in most of the medical journals of the country, is deserving notice. The medical profession on this side of the water, characterized by a spirit of progress, in no department of medicine or surgery has more occasion for self-gratulation than in this one of Otology. The progress which has been made in this department has taken shape. Dr. Roosa's work, which has reached its 4th edition, and this treatise of Dr. Burnett's are two American text-books on diseases of the ear which, all things considered, are superior to any to be found in any language. Dr. Burnett's admirable treatise is characterized by a more ample discussion of the physics of the ear than is contained in the ordinary text-books, and the author is cor-

rect in his observation "that the pathology and therapeutics of the ear cannot be properly understood without a more intimate acquaintance with its anatomy and physiology." We think that he has done valuable service in giving prominence to this portion of his work; and, while it may be distasteful to a casual reader, to the close student it will open up a delightful field for investigation, and yield him a rich harvest of satisfaction when he is later brought face to face with the practical application of these laws. The frequency with which a differential diagnosis turns upon the possession of such knowledge must be obvious to every one who will consider the intimate relationship which this organ sustains to the brain, and the similarity of symptoms which have their origin in some portion of the auditory apparatus to those which are of cerebral inception.

We are led to express a fear that in this day of book-making, when it is so popular to popularize science, and to adapt everything to the wants of the student, that if the truth is not compromised, it is often but half told, and the simplified book, which has been prepared for the—*trade*, proposing to conduct to knowledge by a royal road, does an infinity of harm. The most of these books which are "designed to meet a want," are an insult to the intelligence of the profession.

To do full justice to the subject of this review, which includes the anatomy and physiology, together with the pathology and therapeutics of the ear, would require more than customary space. It may be sufficient to refer to those features of the work which distinguish it from other treatises on the same subject which are accessible to the English reader. The arrangement which the author has adopted, is convenient for study and for reference. Part I. treats of Anatomy and Physiology, divided into sections which consider the external ear, middle ear and internal ear. The sections present in chapters the common sub-divisions; the external ear being made to include: I. The Auricle; II. The External Auditory Canal; III. Membrana Tympani. The middle ear: I. Tympanic Cavity; II. Eustacian Tube and mastoid portion. The internal ear: I. Labyrinth and Auditory Nerve; II. Scheme of relationship between the Middle Ear and Internal Ear. Part II., considers: Diseases and Treatment—with the same divisions and subdivisions as in Part I.

The author has presented concisely the results of the more recent investigations into many obscure physiological questions, and he carefully distinguishes between those which may be accepted as conclusive and those which must be regarded as insufficient to establish any change in views hitherto entertained. He devotes ten pages or more to a review of the experiments which have been made to define the functions of the semicircular canals, commencing with those of Flourens, in 1817, which first suggested the "probability that a lesion of the semicircular canals would produce peculiar disturbances in equilibrium of the body," and led to the suggestion that those canals presided over our co-ordinated movements. The recitation of these experiments is interesting and instructive, studied in connection with disturbances dependent upon pathological changes in this portion of the internal ear; although the present state of our knowledge is not wholly satisfactory to us and experiments have proven a plurality of co-ordinating centres.

Upon the treatment of diseases of the ear, the author has drawn largely from his own experience, and has "freely availed himself of the observations and discoveries of others." Without attempting to consider the work more in detail, we would say there is found so little for adverse criticism and so much to commend, that we submit Dr. Burnett's book as one which should have a place in the library of every physician who wishes to be conversant with this department; and every physician should be informed, at least to a degree sufficient to protect his reputation and to provide for the best interests of those who commit themselves in confidence to his professions.

We need not refer to the mechanical execution of the book, for it has been published by H. C. Lea. H. N. S.

BOOKS AND PAMPHLETS RECEIVED.

A MANUAL FOR THE PRACTICE OF SURGERY. By Thomas Bryant, F. R. C. S., Surgeon to and Lecturer on Surgery at Guy's Hospital, etc., etc., with 672 illustrations. 2nd American from 3rd English edition. *Philadelphia: Henry C. Lea*, 1879. R. 8 vo., pp. 945. Price, cloth, $6.00; sheep, $7.00.

THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION, of the 29th Annual Meeting, held in Buffalo, N. Y., June, 1878. 8 vo., pp. 900, with appendix of pp. 250.

THE NATIONAL DISPENSATORY: Containing the Natural History, Chemistry, Pharmacy, actions and use of Medicines, including those recognized in the Pharmacopœias of the United States and Great Britain. By Alfred Stillé, M. D., L. L. D., and John M. Maisch, Ph. D.; with 201 illustrations. *Philadelphia: Henry C. Lea*, 1879. 8 vo., pp. viii—1621. Price, cloth, $6.75; sheep, $7.50. (Through Gray & Baker).

THE DISEASES OF LIVE STOCK AND THEIR MOST EFFICIENT REMEDIES: Including Horses, Cattle, Sheep and Swine. Being a popular treatise, giving in brief and plain language a description of all the usual diseases to which these animals are liable, and the most successful treatment of American, English and European veterinarians. By Lloyd V. Tellor, M. D. *Philadelphia: D. G. Brinton*, 1879. Pp. 469, 8 vo., cloth.

CLINICAL LECTURES on Diseases Peculiar to Women. By Lombe Atthill, M. D., University of Dublin, etc., etc. Fifth Edition. Revised and enlarged, with illustrations. *Philadelphia: Lindsay & Blakiston*, 1879. 12 mo., pp. 342. Price $2.25.

DISEASES OF THE LIVER: A Clinical Treatise on, by Dr. Fred. Theod. Frerichs, Professor of Clinical Medicine in the University of Berlin, etc., etc. In three volumes. Vol. I., translated by Charles Murchison, M. D., F. R. C. P., etc. *New York: Wm. Wood & Co.*, 1879. 8 vo., pp. 224.

THE TREATMENT OF THE GENITO-URINARY ORGANS, the use of Electricity, Damiana, etc., etc. By J. J. Caldwell, M. D. Reprint, *St. Louis Med. and Surg. Jl.*, June, 1878.

THE NON-ASYLUM TREATMENT OF THE INSANE. By Wm. A. Hammond, M. D. Reprint from *N. Y. State Med. Soc. Transactions*, 1879.

APHASIA, OR APHASIC INSANITY, Which? A Medico-Legal Inquiry. By Dr. C. H. Hughes. Reprint from the *Am. Jl. of Insanity*, Jan., 1879.

THE CAUSES OF SUDDEN DEATH of Puerperal Women. By E. W. Jenks, M. D. Extracted from the *Transactions of the Am. Med. Ass'n.*, 1878.

MATERNAL IMPRESSIONS; Mothers' Marks. An exposé of a Popular Fallacy. By Roswell Parks, A. M., M. D., etc. Reprint from the *Southern Clinic*, Feb., 1879.

REPORT OF THE DEPARTMENT OF HEALTH for the City of Chicago, for the year 1878. H. P. Wright, Registrar of Vital Statistics, Chicago, 1879.

LECTURE NOTES on Chemical Physiology and Pathology, by Victor C. Vaughn, M. D., Ph. D., Lecturer on Medical Chemistry in the University of Michigan, etc., etc. Second edition, revised and enlarged. *Ann Arbor:* 1879.

BOOK ANNOUNCEMENTS.

Lindsay and Blakiston are about to issue a series of Health Primers, to be edited by Dr. W. W. Keen, of Philadelphia, on the general topic of "Preventive Medicine," and especially on I. Hearing and How to keep it, by Charles H. Burnett, M. D.; II. Long Life, and How to reach it, by J. G. Richardson, M. D.; III. Sea Air and Sea Bathing, by Wm. S. Forbes, M. D.; IV. The Summer and its Diseases, by James C. Wilson, M. D.; V. Eyesight, and How to Care for it, by George C. Harlan, M. D.; VI. The Throat and the Voice, by J. Solis Cohen, M. D.; VII. The Winter and its Dangers, by Hamilton Osgood, M. D. VIII. The Mouth and the Teeth, by J. W. White, M. D., D. D. S.; IX. Our Homes, by Henry Hartshorne, M. D.; X. The Skin in Health and Disease, by L. D. Bulkley, M. D.; XI. Brain Work and Overwork, by H. C. Wood, Jr., M. D. Other volumes are in preparation, including the following subjects: "Preventable Disease," "Accidents and Emergencies," "Towns we Live in," "Diet in Health and Disease," "The Art of Nursing," "School and Industrial Hygiene," "Mental Hygiene," etc., etc. They will be 16mo in size, neatly printed on tinted paper, and bound in paper covers. Price, 30 cents; flexible cloth, 50 cents.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Stated Meeting, December 16, 1878. S. G. Moses, M. D., President, in the Chair.

HYSTERIA.—*By T. F. Prewitt, M. D.*

Mrs. T.T. H——., aged 29, was married at the age of 13 years and 3 months, and was delivered of her first child when 14 years and 4 months of age, having a tedious and severe labor, the child weighing 12 pounds. This was followed by a miscarriage—was delivered in her eighteenth year of a male child now living, and a female child also living. Nine years ago had a "false conception," since which she has never been pregnant, and from which time she dates the commencement of her ill health—her health up to this time having been excellent.

Menstruation, which, up to this time had always been perfectly regular and painless, now recurred every three weeks, accompanied by a great deal of pain, simulating labor pains for first two days, but persisting throughout the period in a less degree. The flow became more profuse also.

Four years ago, while absent from home two or three weeks, was taken with severe pains in left hypochondriac and lumbar regions, with severe pain also in the head, extending from forehead to occiput. The pain in head was relieved by morning, but the pain in the side has never deserted her since, except for a few hours at a time. The pain in the side has always recurred at night. It cannot be said to have been periodic, however, since she suffered with it in the day if lying down, and suffered most when upon her left side or back. Was able to sleep only upon her right side. Two or three years ago, after a somewhat hearty supper, was taken with severe pain in the stomach, from which she suffered all night. This was followed by soreness all over—a mere touch of the surface was excruciatingly painful. For first two or three days she was only relieved by repeated hypodermic injections of morphine. After this her sufferings were less, but she was not free from pain. She was in bed at this time for six weeks; had pain and great

soreness in *right* hypochondriac region, and could lie upon neither side. She states that her physician said there was a "lump" at that time in her right side. This lump and pain in the right side eventually disappeared, but in the left side persisted. She has been under treatment constantly for the last four years for this pain, taking among a variety of things, morphine, which seemed to lose its effect to a considerable extent. Indeed she declares that no medication has ever completely relieved this pain—that the medicine put her to sleep and she was not conscious of it during that time—but it was there when she went to sleep and there when she waked up.

On the 23d of November I was called to see her, at the suggestion of the physician under whose care she had been for three or four years in the country, and elicited from her the above history. Upon making a digital examination, I found the uterus retroverted, somewhat enlarged, and the body somewhat tender. The cervix was enlarged, indurated, the posterior lip roughened with small prominences like a nutmeg grater, and about an inch posterior to the os somewhat grooved as though more deeply ulcerated on that side. A speculum examination revealed a patulous os, the posterior lip raw, with papillary projections visible—this surface bled readily and manipulation gave pain. The sound passed backwards to the depth of three and a half inches. She had worn, I learned, a retroversion pessary with a cross-bar, but it gave no relief and was followed by purulent discharges—abscesses as she stated. The ordinary Hodge pessary had been tried too, I think, and had to be removed. Could the cross-bar of the retroversion pessary have caused the deep groove of ulceration perceptible upon posterior part of cervix?

The manipulation of the first examination was followed by great suffering during the night, and the uterus next day was tender and painful. Hot water injections invariably caused such suffering that they had to be discontinued. So marked was the induration and enlargement, especially of posterior lip, that I feared at first malignancy. The coincidence of pain in the left hypochondriac region with uterine disease, is sufficiently common to have suggested at once the relationship in this case. But I venture to think that a pain so constant, so persistent, and so greatly aggravated by the recumbent position, is rare.

In this case, moreover, she stated that her medical attendant said there was a tumor in the left side, but on making exami-

nation I failed to discover it. Later, on meeting the physcian, he assured me there was a tumor there, which could be readily felt by turning the patient partially to the right-side, and on examining the case in this way with him, I was enabled very clearly to define a tumor a little below the ribs, which was movable; slipping backwards and upwards upon manipulation, and which he declared was smaller than when examined by him on former occasions. I believed it to be a so-called floating kidney, its size corresponding—so it impressed me—to this organ.

But if the kidney, what relation did it sustain to the pain in this region of which she constantly complained? The doctor, a very intelligent physician, belived this tumor the source of the pain. If so, how? That it was not malignant disease was certain from its duration, slow progress and general good health of the patient, who, I will say, enjoyed a most excellent appetite and was rather fleshy. That it was not organic disease of the kidney, was also evident from the fact that the urine was and always had been normal. (She has never passed any unusual quantities of urine—none of the limpid flow so common in hysteria). Could it be that the greater freedom of movement which the kidney has in this case, permitted of its pressure upon some of the nerves in this region, and causes the pain when in the recumbent position, and especially when lying upon the left side?

This was the doctor's view, but I could not accept it, and subsequent reflection has only strengthened my original conviction that it was a reflex uterine phenomenon.

At this point I need only to say that under the influence of rest and local treatment, the ulceration has almost completely healed, the enlargement and induration have diminished, and my apprehensions as to the possibility of commencing malignant disease have been dissipated. No attempt was made to introduce a pessary until a few days since, when a Hodge's pessary, No. 30, was tried, but gave such discomfort that it was removed. On the 12th of this month, December, Smith's modification of Hodge's pessary was introduced, pressure upon the body of the uterus posteriorily still causing considerable complaint of pain and tenderness. Yesterday, December 15th, I found her up and dressed, and she expressed herself as much more comfortable, and more free from pain than she had been for some time. She attributed the relief, however, not to the pessary, but to a mixture of bromide of potassium, chloral and morphine, I had sent her three nights before for severe pains in right side of chest.

As a companion picture to the above, I recall a case not unlike it in some of its symptoms, but occurring in a male. The subject was a patient in the City Hospital in 1877, I think; and I give, almost *verbatim*, some brief notes of the case taken at the time.

Thomas Slatterly, aged 29, single, and a plumber by occupancy, went to Utah and Nevada in 1869, up to which time he had always had good health. While out in those territories he was exposed a great deal to cold, sleeping out at nights, etc. He has also dissipated a good deal. Thinks he first noticed the pain in his left side, of which he now complain, in 1873, at which time he was living in a cabin with two others and leading a very irregular life. He hunted, camped and sometimes slept in the snow. He first felt the pain in his left side above the crest of the ilium, when lying down at night. Pressure would relieve it, when he would turn over and go to sleep. Again it would recur, he could not sleep, and he would get on his hands and knees for relief. This has been growing worse and worse; he states that he has lost flesh; he looks thin, but is not emaciated. The pain has always been upon the left side, and extends from the back, round above and to the inner side of crest of ilium and downwards towards the groin. He thinks the left leg is weaker than the right; stooping or bending often causes severe pain in the affected side, accompanied by a spasm of the abdominal muscles. *He cannot lie down at all*, without great suffering, and gets all his sleep in the sitting posture or in the genu-pectoral position. I have more than once seen him asleep upon his knees, his arms and head resting upon the bed.

There is no paralysis of the sphincters. He walks best after moving about awhile. There is some tenderness over the first and also over the lower dorsal vertebræ. Extension of the body relieves the pain, bending increases it; a blister applied over the back once relieved the pain for a time. *His appetite has always been good.* This case excited a good deal of interest among the consulting staff of the hospital and much discussion as to the diagnosis. The previous history of exposure and hardships was such as to have justified a very grave diagnosis, yet my friend Dr. Bauduy, made a diagnosis of hypochondriasis, in which I think he was probably correct; at least no organic lesion could be discovered to account for the symptoms. The subsequent history of the case I do not know, except that the man was, subsequently to the taking of the above notes, discharged from the hospital, as it was supposed that there was nothing very serious the matter with him.

Here are two cases so strikingly alike that if both had occurred in females they would have been unhesitatingly pronounced hysteria. Yet we say one only is hysterical, while the other we pronounce hypochondriasis. And why?

I have hurriedly reported these cases, and placed them in juxtaposition, because they present some features of interest, and because they bring up for review the whole subject of hysteria, its simulations of diseases, and their relationship to uterine disorders. From time immemorial hysteria has been considered the vagrant offspring of a disordered uterus, its christening perpetuating the view of its supposed paternity. It is the very harlequin of diseases, assuming now the role of the gravest of maladies and perplexing even the veteran in his profession, and anon playing the most fantastic tricks and indulging in violent outbursts which alarm the tyro by their tragic fury, but which strike the initiated as lame and impotent travesties.

The public, and even the profession, are too apt to regard it as something unreal, a fit subject for jest and ridicule. Yet the sufferings it entails are as real, the pain experienced as great, as that of any organic malady which it may simulate. Indeed, there is nothing characteristic of hysterical pain, *per se*, which will distinguish it from pain the result of organic disease, and an individual suffers as much from a pain he thinks he feels as from the pain he does feel.

The phenomena of this "pathological Proteus" are presenting themselves every day to the practitioner of every branch of our profession for analysis and differential diagnosis, and we cannot have too great familiarity with the characteristics common to them all. So perfect is the mimicry of the real in many cases as to bewilder the most expert. Then, too, the mimic malady may mount astride some real disorder and so mask its symptoms as to mislead the most wary and cautious.

But what shall we include under the term Hysteria? To what limits shall we restrict it; how ample shall be its boundaries? In the days of its christening, and for centuries later, the uterus was supposed to be everything. "*Mulier est propter uterum*" epigrammatically and literally expressed the view of older writers as to the preeminent influence of this organ in the female economy. In the last half century the ovary has come to be recognized as the source of the physiological changes in females; and Dr. Robert Lee, of London, argues that it is in this organ that hysteria has its origin, and in this view Barnes concurs. But is it true that the nervous phenom-

ena, classed under the head of hysterical in the broadest sense of the term, have their origin in the ovary or uterus, one or both exclusively? Such a view I think entirely too narrow. With Sir James Paget I believe that "the relation of the sexual organs to hysteria or '*neuro mimesis*' though more intense, is only the same in kind as that of an injured joint or an irritable stomach."

The traditional view of the pathology of hysteria has led many to question its occurrence in the male. But this, I think, can only result from too contracted a view of the *subject*, or giving the *term* either too wide or too restricted a significance. If by hysteria we mean only the convulsive paroxysms with which we so frequently meet in females, then men rarely have hysteria, though instances are not lacking where hysterical paroxysms have been observed in men. If, however, the term be made to include all the Protean manifestations of nervous mimicry of disease, then there is no doubt of its frequent existence among men as well as women. Wherein does the delusion of the man with a snake in his stomach differ from that of the woman who imagines herself pregnant, is convinced she is increasing in size, feels the movements of the fœtus, etc.? Or the jerking phenomena which affected men as well, in the religious excitements of former days, from the same phenomena in women? Or, if you please, the nervous state which we not unfrequently meet with in men, who shed tears upon the slightest provocation, from a like condition in females? It is true if a man has pain in some region, or ill defined sensations for which we can find no adequate local cause—is despondent and blue—we say he is hypochondriacal. If it be a woman, we pronounce it hysterical. But so far as the pathology of the two is concerned, wherein do they differ? Manifestly the diagnosis is based upon the fact that one has a uterus and the other has not, showing how far nomenclature and tradition may warp opinions for ages. Sydenham long ago placed the phenomena of hypochondriasis and hysteria in the same category.

Hypochondriasis is a disease of males especially; Hysteria, par excellence, of females; yet, each sex may be affected with one or the other. In each the centre of the emotions is the brain, and the viscera, according to Tilt, but the reflex centres that stimulate the nervous system to emotional acts. In woman, whose nervous organization renders her more prone to emotional excitement than man, it is not surprising to find uterine or ovarian disorder, giving rise to intense nervous paroxysms

But will any one question the fact that a woman may have hysteria without uterine or ovarian disease? On the other hand, is it not notorious that women may have the gravest diseases of the uterus or ovary, with not a single symptom that can be called hysterical? Something else, then, is necessary than that the individual should have a uterus, or even a disordered uterus, in order that we shall have the phenomena of hysteria. The lacking factor is a "predisposing nervous state." With the existence of this, there is no reason why disorders of other organs may not elicit the same phenomena; and so, in my opinion, they undoubtedly do. For this reason, Sir James Paget would abolish the term hysteria and adopt "neuromimesis." But the term is too deeply rooted, and, indeed, too expressive, of the frequent relationship between uterine and ovarian disorders and the emotional phenomena in nervous women to be easily surrendered, or to make it desirable that it should be. But it might be limited, as he suggests, to the convulsive paroxysms which characterize the nervous outbursts, while the simulation of more grave maladies, whether in women or in men, might be classed as "nervous mimicries," and thus avoid the errors by implication to which the term hysteria is apt to lead. The recognition of the fact that, not the uterus and ovaries alone, but that any disordered viscus, whether the liver, the stomach, the pancreas, or any other, *may* give rise to emotional and reflex nervous disturbances, would, upon the one hand, free that much-abused organ, the uterus, from many unjust imputations, and spare it, in a measure, the pitiless manipulations of modern gynæcology, and on the other, lead us to seek in other organs an explanation of the phenomena and complaints of suffering, which we are too apt to regard as visionary, or evidence of malingering, because there is no uterus to which we can point as the offending organ.

DISCUSSION OF HYSTERIA.

Dr. Maughs: Dr. Prewitt has given a very interesting case connected with retroversion of the uterus—a very frequent association of Hysteria. There is, as in Dr. Prewitt's case, not unfrequently a derangement of locomotion; patients suffering from simple uterine displacement have what is known as hysterical paralysis; they are confined to the bed from absolute inability to walk. I had a very interesting case, some years ago, of a patient who had been confined to bed three years,—a young woman then nineteen years of age. She had never been out of bed at any time. She had been blistered down her

spine for supposed spinal disease; there was nothing the matter with her spine. On examination I found her suffering with *endometritis*, and by treating her for uterine derangement, in the course of six weeks the patient was able to dance. This is the general condition of the uterus that produces loss of locomotion, and mental derangement. I had a patient from a distance, with uterine displacement, who had hysterical epilepsy, the result of retroversion. This patient had been an invalid, had daily hysterical convulsions, assuming an epileptiform character; she was benefited by simply addressing the treatment to the uterus. The term hysteria itself, applied exclusively to females, is in that respect a misnomer. Dr. Prewitt's idea is entirely correct; it may affect persons of either sex with an impressible temperament; it is a disorder of the nervous system; it generally occurs with the female on account of the excessive excitability of her nervous system, and it is very frequently connected with uterine derangement, because in the female this organ is the center of *emotion*, and the whole system of woman immediately partakes of derangement of the reproductivity that constitutes her life,—the great end and aim of her being—the reproduction of the species, and upon which all her emotions are grafted; every emotion of her soul is tinted by the influence, unfelt and unknown, of her reproductive system; consequently, with her excessively mobile temperament, we find hysteria resulting from uterine displacement. Dr. Prewitt's case will prove the importance and necessity of correcting such displacement when it exists, to relieve hysteria. I recollect a case which Dr. Yarnall saw, of a little woman who was put on the boat and from the landing brought on a chair to my office, and thence to St. John's Hospital. She was suffering from uterine displacement with *hypertrophy*, and hyperplasia, and the hyperasthesia which we have in these conditions. I placed the womb in the proper position and told her to take up her bed and walk, which she did. She came back a year or two afterwards, for another disorder, but was relieved of her hysterical lameness, the result of the displacement of the retroverted uterus.

Dr. G. A. Moses: I think Dr. Prewitt has taken very just grounds; that the term, applied as it has heretofore been, is a misnomer; and just such cases as are classical—just such cases as Dr. Maughs referred to, as hysterical lameness, like the hysterical knee-joint that Sir B. Brodie amputated for, are cases which I believe, now, would not be included in any class of hysteria—they would come under the nomenclature of

uterine lameness, uterine pain, reflex in character, but entirely regardless of the condition which has been so aptly described by Dr. Maughs as that of hysteria, that is, a deficiency or absence of volition in proportion to motility or sensation. I think we should endeavor, in reporting cases here, and in describing them at any time, in the present state of knowledge and investigation, to separate distinctly the cases such as Dr. Maughs has described—lameness for instance—from uterine displacement, from such cases as are properly denominated by Charcot and others hysteria, where the lesion is undoubtedly due to some error of nerve nutrition. The true pathology of the disease is to be sought for in the nervous centres, in the brain, or the spine, or at some point in the ganglionic system, and such cases of uterine lameness (dyskenesia, Dr. Barnes calls it) do not come under the head of hysterical complaints. Perhaps it might be better, if the term had not become classical, in relation to hysterical disturbance, that the name hysteria should be applied to all classes of disease arising directly and properly from uterine lesions, and that the classes of cases separated from uterine lesions and independent of them, perhaps, should receive some other designation; but in the present state of the discussion, I think the term "hysterical" should be entirely confined to the classes of disease and pathological conditions that exhibit themselves in deficiency or absence of volition in proportion to motility or sensation, and all other cases of uterine reflex disorder be designated by the term "uterine."

Dr. Robinson: I have only so much to say Mr. President, that while I agree with Dr. Prewitt to a certain extent that the name hysteria is a misnomer, inasmuch as the disease so called is not confined to females, or, rather, the manifestations which we call hysteria are not confined to the female, but may occur in men as well, and inasmuch as we find the same manifestations dependant on other causes than uterine disturbances, hence, again, the term hysteria is a misnomer,—while I agree with him so far, I think at the same time there is a significance in the term which ought still to be preserved, or which should give the preservation a consideration. We do find the same manifestations in men as in women, and I think due very often to analogous causes, that is, affections of the analogous male organs. We have in women for instance, the uterus and its appendages, and we have the sexual organs in men, more especially we have an organ which is closely analagous to the uterus, and that is the prostate gland; and I have myself seen within the last four or five years, many cases in which there

were almost precisely the same symptoms manifested through some affection of the prostate gland and that portion of the urethra which passes through the prostate gland, as those in women affected with hysteria from uterine disturbance. We know, as Dr. Maughs has related, it is very common to find these symptoms manifested in displacement of the womb, or where any irritation exists of the neck of the womb. I saw, recently, a very interesting case with Dr. Engelmann, in which the irritation was due to the presence possibly of the fœtus within the womb, producing thereby some irritation of the uterine neck. I have seen precisely the same kind of symptoms produced by chronic irritations of the prostate gland, by those suffering from chronic prostatitis. In this disease we have spermatorrhœa as one of the symptoms; in women we have, not unfrequently, cervical leucorrhœa; in men we have abundant discharges from the prostate gland itself, not necessarily spermatorrhœa; we have the same great depression of spirits, the same disposition to weakening; indeed, men become, under such circumstances, more or less emasculated, not only losing their virile powers actually, but secondarily accompanied by nervous depression. I have noticed one symptom in men as well as in women, which is of some value in a diagnostic point of view, and that is the most peculiar condition of the pulse. I find the pulse irregular and rapid, mostly at the same time feeble, with very little resistance, at one moment rapid, the next moment exceedingly slow in its beat. When a young man comes to me and I find such a pulse, I immediately suspect that he has some derangement of the sexual organs, which, through the sympathetic system, affects the action of the heart. On further questioning, I find he suffers from palpitation, from dyspnœa; that he suffers from disturbance in his sleep, restlessness, anxiety, and great depression of spirits. I find the same symptoms equally in women, and I have come to the conclusion that in a great proportion, the true hysteria, with the manifestation of these symptoms, is due in men to irritation of the prostate gland, and in women to some derangement of the uterine neck.

Dr. Bauduy: I fully agree with Dr. Robinson, as to the probable hysteria in males. I think hysteria is simply a disease of the nervous system. With regard to the pathology we know little or nothing. I think it occurs in males, though not with the same frequency that it does in females. I think that some of the most interesting views (without going over the old beaten track) connected with the subject have been

recently illustrated by Charcot. He attaches an immense amount of importance to ovarian irritation as being, according to his ideas, one of the starting-points of hysterical manifestations. He claims moreover that it is more particularly the left ovary that is the source of the disease, and that this can be invariably proven by the ovarian hyperæsthesia which occurs in these cases; and that moreover hysterical manifestations can be controlled by ovarian pressure, so much so that he has invented, for his clinics, some kind of screw apparatus which, by having a pad applied to it, and being placed over the ovary, he claims that the symptoms will invariably be arrested. Where this mechanical contrivance can not be made use of, he asserts that physicians will find that they will have little or no difficulty in controlling the manifestation by firmly seizing the ovary and making pressure on it. He has moreover proven, very clearly to my mind, that complicating these conditions of ovarian irritation, there usually exists also, and can generally be ascertained in examining hysterical women a condition, which he terms hemianæsthesia, which is simply an impairment of sensibility existing in one longitudinal half of the body. According to his observations, it is pretty conclusively proven that this corresponds to the ovarian seat of irritation—the left side of the body. I have myself not unfrequently discovered manifestations of hemianæsthesia by seeking for it. Charcot, therefore, particularly insists that in nearly all conditions of hysterical manisfestation, this hemianæsthetic condition should be sought for, especially in obscure cases, and that it will greatly assist diagnosis. I remember a case which I saw with Dr. S———, of this city—a young lady who had marked retroversion of the uterus, and who had been bed-ridden from hysterical manifestations quite a number of months. We found this hemianæsthesia clearly coincident with left ovarian irritation, and limiting itself exactly at the median line. By placing her under treatment, especially of a moral character, she was very greatly benefited. Then, again, I think another fact which has been overlooked in connection with these cases, especially where the diagnosis is obscure, is one to which Charcot has called attention—the anæsthetic larynx, which almost invariably complicates cases of hysteria.

Dr. Hammond, in the fifth edition of his work on nervous diseases, calls the attention of the profession to this symptom, which has been overlooked. Hammond also is certain that, in his experience in hysterical cases, it rarely ever ceases to make its presence known where it is sought for. We know

that anæmia is one of the most general causes of irritation of the nervous system, and a general reflex irritation, or very irritable condition of the spinal cord so produced, may be a starting-point of hysterical manifestation. At any rate, reflex irritation must in all probability have something to do with it. I am not exactly prepared to take the position that is taken by one or two gentlemen this evening, that these cases of uterine disease, as referred to by Dr. Maughs, can not be the starting-point of the disease—actually be the *cause* of hysterical disease; because a retroverted uterus, or a gonnorrhœa, or any disease of the genito-urinary apparatus, will produce reflex paraphlegia; and I can conceive how abnormal conditions of the uterus might also be the starting-point of hysteria. Yet at the same time I fully concur with Dr. Robinson, that the disease has been unfortunately named, and should not, as Niemeyer remarks, be called "hysteria," although persons who have wombs are peculiarly liable to the development of hysteria on account of the very existence of a womb. Then, again, that the ovaries, perhaps the left one most frequently, may be a source of hysterical disease, can not be doubted; we should take into consideration how many nervous diseases start from a very limited and restricted source of irritation. Now, in reference to the experiments that are being made by Charcot in Europe, and attracting so much attention in Paris, so much so that it is almost impossible to obtain admission to his clinics without tickets (in these very remarkable experiments he has proved that even retinal irritation will produce nervous manifestations), he is proving every day that reflexion of the electric light upon the retina will produce cataleptic symptoms, and that after the electric light has been withdrawn, the woman is thrust into a somnambulic condition; so that Charcot at will produces cataleptic or somnambulic conditions. Moreover, he avouches that he can produce cataleptic conditions on one side of the body and somnambulic on the other side of the body. Then again, by impressions made on the retina, producing these irritations, he has also, as is now very well known, produced all the worst manifestations of hystero-epilepsy, so that, therefore, if these impressions made on the retina may be the starting point of cataleptic, somnambulic, or hystero-epileptic conditions, we can readily understand how affections of the uterus, with its close connection with the ganglionic and spinal system of nerves, must necessarily give rise to great irritation, and produce very disastrous effects, so far as nervous symptoms are

concerned. Although, as I said before, I believe in hysteria in men, who have no ovaries, yet my general idea is that hysteria is due to anæmia and nervous depression, which are more particularly fostered by impaired nutrition than by any other conditions we are aware of. Whilst, at the same time, nerve debility may result from hyperæmic conditions, yet one of the commonest causes in women of these neuroses is undoubtedly derangements of the generative organs, which have resulted in anæmia. And I think the general relief which has been obtained by placing women under tonic treatment, preparations of iron, quinine, and bark, proves conclusively that this is undoubtedly one of the underlying, pathological causes of the nervous disturbance. Therefore I think that, so far as we have advanced, we have not reached any definite ideas as regards the pathology of hysteria—that we are still at sea with regard to the definite pathology of the disease, and that these experiments of Charcot merely throw some light upon the subject. Then, I must take exception to my friend, Dr. Prewitt, with regard to the analogy between hypochondriasis and hysteria. I think the two differ so much as to make it impossible to confound them as allied affections.

Dr. Maughs: Dr. Bauduy is a Frenchman, and it is very natural for him to go to France for ideas, which are new in Paris and old in this country. Now, Charcot has made a great discovery, in discovering that there is some connection between hysteria and tenderness of the left ovary. Dr. Meigs taught that and recommended pressure of the ovary twenty years ago, and I have myself practiced it for the last twenty years. Meigs states he has relieved a violent attack of hysteria by balancing the uterus on his finger, which took off the tension from the broad ligaments. It is most frequently found in the left ovary, as Charcot states. If there is any pain in the ovaries, it is probably three times out of five or three times out of four in the left ovary, for anatomical reasons. The term hysteria, while it does not necessarily imply to the modern practitioner any disease of the uterus, does imply a congeries of symptoms in which the emotional and sensational movements are in excess; it refers to a congeries of symptoms, in which there is a want of voluntary force, so much so that Wilkes, a very learned authority on diseases of the nervous system, contends that it is a thing which can be prevented; that it is aggravated by the sympathy of the patient, and that the patient can often prevent an attack of hysteria if she had the will to do it. But that is just where the difficulty is. He

recommends that if the patient be treated harshly that it would often cure the hysteria. I see no objection, with my friend Dr. Moses, to the term "hysterical lameness." It not unfrequently happens that while the patient is absolutely lame, while she is absolutely laboring under hemiplegia, she is not necessarily so, and it not unfrequently happens that if that patient had the will to move, she could move just as well as anybody else. The patient is absolutely lame because she has not the will-force to walk. But at any alarm, such as an alarm of fire, she has forgotten her lameness and runs very readily; therefore it is hysterical. Of course, if the definition I gave be true, men may certainly have hysteria; it is most frequently associated with diseases of the uterus in the female, on account of the motility of her organization.

Dr. Coles: It has been remarked that hysteria is a broad subject. This is undoubtedly true; so much so, indeed, that we have necessarily to take a very broad view of it. From a practical observation of this affection as we meet with it in our every-day experience, it seems to me that it is only necessary to reflect for a moment to be convinced that hysteria, whilst it is frequently, perhaps in a majority of cases, connected with the generative system, it is not necessarily or specifically related thereto, nor is it exclusively confined to women.

While it is true, as Dr. Bauduy remarks, that hysteria frequently results from anæmia, or, in other words that anæmia in the female will sooner or later bring about some one or another of the various symptoms which we call "hysterical," yet I am sure that we not unfrequently meet with some of the very worst cases of this disease in subjects who are anything but anæmic. We meet with it in females who are exceedingly plethoric, and in such instances the disturbing cause may be just the opposite to the condition of anæmia. Again the disturbing cause may lie in some mal-nutrition of the generative organs, of the brain or of any portion of the nervous system; and indeed, in certain subjects, of almost any organ in the body. It may depend upon an abnormal state of the blood, other than the conditions of anæmia or plethora, in which the chemico-vital functions of the circulation are interfered with. I have seen this occur in the rheumatic diathesis, and in those vague disturbances which belong to suppressed gout. Nor are these hysterical tendencies confined, as we have said, to women; they are occasionally met with, in a marked degree, in men who have impaired their nervous system through drink or other excesses. In such

cases, if the patients had happened to be of the female sex, they would have been promptly pronounced hysterical.

It seems to me that the experiments of Charcot, to which Dr. Bauduy alludes, prove very conclusively that these profound nervous disturbances that we frequently encounter in the female, and which are comprised in the term hysteria, are not necessarily connected with ovarian irritation. It appears to me that Dr. Charcot's experiments contradict his assumptions on that point. For, aside from the difficulty of successfully making pressure on the ovaries, (which he claims to do with so much precision and ease)—this being his favorite method of restoring his patients from the hystero-epileptic condition—this is not the only method by which he has succeeded in restoration. In the first place he throws certain selected subjects into a cataleptic state by means of impressions addressed to distant organs—as by a strong light to the eye, or certain sounds to the ear. This condition is modified or relieved, as readily by placing a screen between the patient and the light or by simply blowing in the face, as by compression of the ovary. This fact would seem to exclude the claim that the ovaries are the pivots upon which these manifestations intrinsically turn.

The fact that women are peculiarly prone to hysteria is chiefly owing to their being far more impressible than men. There is as much difference between the impressibility of the sexes as in their anatomical conformation. In addition to this there may be engrafted an hereditary nervous susceptibility. Hysteria, like insanity, may be hereditary. Psychical impressibility, calculated on the slightest provocation to culminate in hysteria, is thus frequently transmitted. These facts should be borne in mind whilst accepting Dr. Maughs' proposition, that uterine displacements, ovarian irritation, and other disturbances of the generative organs, more frequently than any other one cause, produce hysteria; for the reason he suggests, that nature seems to have concentrated the main-spring of the female economy in that department of her being which is most intimately involved in the propagation of her race.

Dr. Boisliniere: One fact in confirmation of what Dr. Maughs said just now is, that if you take a chicken and draw a chalk line before him, he will never move; he will stand there half an hour and look at it. Another fact stated here, which I think clinical facts prove, is the susceptibility of the left side of the ovarian nervous system to be affected more than the right side. What Brodie called the hysterical point. It was

explained by him through the displacement of the uterus to the right, which is the normal displacement of the uterus, dragging along the broad ligament of the left, which caused pain here by pressure on the ovary on that side. The ovary in the female has been called the female testicle, secreting the product necessary for conception, and it is to be noticed that the diseases which affect men are mostly on the left side also. Dr. Prewitt and the surgeons will remember that the left testicle is more frequently affected than the right, in orchitis for instance. I have now under observation a young man who presents all the symptoms described as hysteria. It is really a form of insanity, a monomania; he is troubled with a varicose condition of the left testicle.

Dr. S. G. Moses: Did not that case have something to do with onanism?

Dr. Boisliniere: No; the veins of the testicle are very well marked, and this constant irritation of the left testicle has caused in him a sort of melancholia. He ought to be in an insane asylum. I proposed to operate, but he was not willing to submit. In other cases, ligature of the vessels has cured this form of hysteria in men. The Grecian sculptors, who were excellent anatomists in their æsthetic works, always represent the left larger than the right testicle. Therefore, when I find hysteria or symptoms resembling hysteria in a man, I would suspect some abnormal condition of the left testicle, perhaps the result of old gonorrhœal troubles, or syphilitic, or varicocele or hypertrophy. That would be an analogue of the irritation of the left ovary, which I would say is the most frequent cause of hysteria in women. In reference to this, I will say that my practice has not confirmed the theoretical views of Charcot; that I have not relieved hysterical symptoms by pressure on the ovary; on the contrary I think it did harm. But you can remove hysteria by relieving the dislocation of an ovary. Then again, I will also state that my observations coincide very well with those of Dr. Coles; that I have seen the very worst forms of hysteria in very strong, full-blooded girls. I have seen it among those hard-working Irish girls; I have seen them thrown into the most terrible hysterical fits, that would require four or five men to hold them in bed, and without any cause except a moral cause. This moral cause is after all the starting-point. There may be an exciting cause of some distant organ, or perhaps plethora, or a toxæmic condition is the starting-point of the phenomena, but in the *incipiency* of these attacks of hysteria there is always a moral cause. One of the proofs of this is that

we never see a woman taken with hysterical fits when she is alone; she always seeks sympathy. A woman has never been found in bed with an attack of hysteria simulating epilepsy. And if the attack has begun, it is beyond the control of the patient. The attack begins at the nervous centers and then soon gets beyond the control of the patient. About the treatment of hysteria, I have found that in cases of that description where the patients were strong, they are often relieved by a very heroic treatment. I place them on the floor and douse three or four buckets of cold water on them, and they soon get over it. I sometime follow the advice of Dewees, and make them swallow immense quantities of cold water. The shock in this way relieves them. In ordinary cases, where there is simply a nervous condition, the ordinary nervines will do very well—large doses of chloral administered either by the mouth or rectum. I find that answers as well as anything else, and acts quicker than valerian and other things which have a doubtful efficacy. Of course, if there is any organ to be treated, that is to be done after.

Dr. Coles: How much chloral do you use?

Dr. Boisliniere: I give twenty-grain doses every two hours, or, by injection, forty or fifty grains.

Dr. S. G. Moses: I feel inclined to mention a case of hysteria which came under my observation many years ago; it rarely happens that we have the opportunity of making *post mortem* examination of those who die apparently from this disease.

About forty years ago, when I was a very young man, the following case came under my medical care.

Miss H. F——, about twenty-five years of age, well developed and remarkably intelligent, had suffered several years before from a very severe attack of whooping cough, which left her with a peculiar spasmodic cough, or, rather, a crowing, like a chicken; this continued coming on occasionally for several years. She had been under the medical treatment of the eminent Dr. Nathaniel Chapman, formerly Professor of Practice of Medicine in the University of Pennsylvania, and had frequently been seen by the late Dr. Mitchell and other physicians of Philadelphia, where she had resided. All treatment failed to relieve this peculiar attack, when she came under my charge in 1835, in Bordentown, New Jersey, where I commenced my medical career. At this time the attacks of this "cock-crowing" had become periodical; at about seven, P. M., the return was certain; it lasted about five or ten minutes,

then disappeared to return the following evening, when, after perhaps half an hour's prostration, she would regain her usual health. At each menstrual period these attacks were more marked and lasting longer and with greater severity as the catamenia were irregular and scanty; and as she presented the appearance of decided anæmia I hoped to relieve her by ferruginous preparations, etc. As I was young and very enthusiastic, and as "spinal irritations" were the order of the day, I determined to try counter-irritation to the spine, and did so perseveringly, using at first dry cupping, which for a time appeared to do good, in fact, suspending the attacks for several days at a time. These means at last failed, and I resorted to blisters and even the actual cautery, issues, etc., and I thought that with these measures I had cured my patient. For several weeks, if I remember correctly, the attacks subsided: the catamenia became more regular and of better character. About this time, perhaps six or eight months after she had been in my charge, the fatal illness of her mother, from cancer of the stomach, was a great shock to her nervous system and then the attacks returned with renewed violence. The former measures were tried without avail; the attacks were always periodical, viz., daily at the specified hour; were occasionally accompanied by spasms; the limbs would be thrown into violent contortions; every muscle of the body became affected, accompanied by intense pain; the most painful, however, were the contractions of the eyelids, pressing forcibly upon the globe of the eye; the muscular contraction would dislocate the fingers, and I have seen the hands pressed back almost against the forearm, the humerus dislocated, the legs drawn up so that the heels would press most painfully against the buttocks. At times the abdominal muscles would partake of these general spasmodic actions, nor were spasms confined to the voluntary muscles; the heart's action would be suspended for an appreciable time, until frequently I would almost think that she was dead. The bowels emptied themselves of their entire contents in a few minutes, and the contents of the bladder were ejected with great force. At no time, however, was there loss of consciousness, though the spasmodic attacks almost appeared to be epileptiform; the attacks lost their periodicity and became almost constant. I have remained at the bed for hour after hour watching these wonderful contortions, occasionally enabled to relieve them temporarily by pressing on some superficial nerve; especially could the spasms of the palpebræ be arrested by pressure on the supraorbital nerve, etc. During

all this time the cock-crowings would almost invariably return at the evening hour, and so loud that I have often heard them at the distance of half a mile. The general spasms would disappear perhaps for several months and then reappear. The tenderness of the spine during these severe attacks was always greatly increased, and so sensitive was the spine that I have frequently brought on a spasm by slight pressure at any time. I might mention here that the "cock-crowing" could be induced by certain odors; the smoke of a cigar, for instance, would certainly induce it; indeed, almost any strong odor, so sensitive did she become, that I have many times seen an attack come on by some one coming into her room with his clothes smelling of tobacco-smoke. After she had been under my treatment for perhaps eighteen months, she was seized with insomnia of the most terrible duration. Night after night, for nearly two weeks this sleeplessness continued; no opiates appeared to be of any service. Finally, I consulted with the late Drs. Sam. Jackson, J. K. Mitchell and Chapman. They all decided that it was absolutely necessary to induce sleep, and advised that I should give morphia until this effect should be accomplished. I gave her two grs. of muriate of morphia every two hours until she had taken twenty-four grains. The only apparent effect was violent itching of the nose; so I stopped the morphia. About twelve hours after I had stopped, the spasms were quieted and she fell asleep; she slept for twenty-four hours, during which time I watched her; the sleep appeared as natural and gentle as that of a young infant. I watched, hoping that when she awoke, she would be relieved, but she awoke in a spasm. I then determined never again to try this treatment.

About four weeks after this morphia treatment, I was one night suddenly called to my patient. I found her violently insane, noisy, pitching the pillows, anything that she could reach, about the room; driving her faithful nurse, a dear sister, from her room, and reviling all those she loved; she was a raving maniac; and now every appearance of spasmodic disease disappeared—there was not a single symptom of it—I would go into the room with a lighted cigar without producing any effect; the violence of the attack gradually subsided; no spasm. One very singular circumstance, I remember, occurred one day when she was quite tranquil. I entered the room smoking immoderately; she attempted to crow like a cock and then burst into peals of laughter. However, she was always afraid of me during her insanity. I could easily control her; sometimes I

would read the Episcopal service, during which time she would be perfectly quiet and respectful; she was a very sincere member of that church. During this period I made, at the suggestion of Dr. Sam. Jackson, a careful digital examinal of the uterus; I could not find any tenderness or any other evidence of uterine trouble. I might here mention that during all this time the menses were regular, although rather scanty.

At the end of three months she gradually, or I should say rather suddenly, recovered from the attack of insanity. She one night fell quietly to sleep, sleeping for nearly twelve hours, and when she awoke reason had entirely returned; she had no recollection of anything which had occurred during the attack. There was no spasm, nor appearance of any. This condition continued for several days, perhaps a week or ten days, when, one day while sitting up in bed, talking to me most cheerfully, about the usual evening hour of the former attacks, all the hysterical symptoms reappeared. This condition continued, sometimes with greater, sometimes less, severity.

I forgot to mention that during the time of my attendance, between three and four years, it was difficult often to find proper nourishment for her. I remember that the only nourishment she could take without inducing spasms of the throat was the rennet curd; she absolutely took nothing else for six months. There was no deception, as her sister was always present in the room, or some one else; she was never left alone. At another long period she could take almost any food with impunity.

I left Bordentown in 1839. At that time she was entirely confined to her bed, as the contraction of the muscles of the legs and of the feet appeared to be permanent, or rather the limbs could not be straightened out without inducing great agony. I returned in 1840, and went to visit my patient. She was much worse than when I left her, about eight months previously; she could no longer take any food; the spasmodic attacks continued, and for the last forty days of her life she had swallowed, *once* a day, about ½ pint of cold water, and this with a cupping glass applied to the throat and a few drops of blood drawn. She felt that she was starving, and was anxious for food and drink, but the moment she attempted to swallow the food or drink it was spasmodically ejected. Finally she died, quietly and calmly, requesting in her last moments that I should make an autopsy of her remains.

During a rather long experience, I have never met with a similar case, and certainly seldom has it been my lot to know a

person more intelligent and more courageous—never complaining, save when suffering such pain as only the rack could inflict, and then, always apologizing for having given vent to her feelings. About twelve hours after death, Dr. Van Buren and myself made the autopsy. To my surprise, I found that the limbs were straitened out and the muscular rigidity had entirely disappeared.

One remarkable fact in this case was that the body was well nourished, at least the whole body was covered by one-half an inch of fat, and the limbs were well rounded.

I should have mentioned that during the last few weeks of her life there was but little urine secreted and no alvine discharge, excepting when moved by enemas, and then scarcely any fœcal matter; also, that it was impossible to administer nutriment by enemata, as any effort to do so immediately caused intense spasmodic contractions, ejecting the injections.

The general appearance of the body was like marble, entirely colorless. Upon opening the abdominal walls, no effusion—the peritoneum remarkably colorless—the liver pale yellow—same condition of all the contents of thorax and abdomen. The lungs, heart, spleen, uterus and appendages and kidneys were each carefully examined. No traces of disease could be detected. Perhaps the uterus and ovaries were rather smaller than usual—rather atrophied—bladder perfectly healthy, and, in fact, no organic change of any appreciable character. The brain healthy—no bloody puncta—the spinal column carefully opened—the membranes covering the spinal cord unchanged. The only portion which evidenced any peculiarity was that the vessels of the cauda equina were slightly engorged with red blood, the only red spot apparent. We made a very careful and minute examination.

I may repeat that we found no pathological changes sufficient to account for death. Only anæmia. What, then, produced death? She died of starvation, or rather, of the absolutely anæmic condition; the blood in its impoverished state was no longer able to stimulate the organism to action.

I might here mention that a sister was somewhat similarly affected, but in her case the spasms partook more of the epileptic character, and she found relief from the use of opium and venesection. It was her habit to take about four ounces of laudanum every night for many years. She finally died from general dropsy.

I must apologize for having so long trespassed upon your time, but this case of "hysteria," it seemed to me, might interest the society.

Dr. Bauduy: I merely wish to say a few words with a view of inquiring from some of the gentlemen present, as to whether they did not think that Dr. Moses' case very closely similated the manifestations of hystero-epilepsy. I simply base that view of the case on those peculiar dislocations, which notwithstanding the Protean manifestations of ordinary hysteria, do not occur in that disease. It seems to me the case would more properly be relegated to hystero-epilepsy.

Dr. Moses: Except that, that there never was any loss of consciousness under the convulsive attack.

Dr. Bauduy: As regards the development of certain neurotic affections on one side, especially in reference to hysteria, my idea is that it is not at all unusual for many of the neuroses to manifest themselves unilaterally, for frequently in chorea, and epilepsy sometimes, the paraplegic manifestations are limited to one side of the body. But as regards the hemianæsthesia, it is probably due to the involvment of that region which produces hysteria. I mean of course that particular portion of the brain which is now considered to be the starting-point of all hemianæsthetic affections. In hysteria there is anæmia of that region, probably. That is pretty definitely settled pathology.

Dr. Prewitt: In a paper read on another occasion I referred to the case of a man named Slatterly, in the city hospital, which was very much like a case which I reported of a woman who had retroversion of the uterus and ulceration of the cervix, etc., etc. This man, a soldier, had pain on one side only. He could not move about except on his knees. The conclusion to which we all arrived, was that it was a case of hypochondriasis. Dr. Bauduy takes the ground that the difference between hypochondriasis and hysteria is very decided and very clear. In the paper which I read I took the opposite position. Sydenham, in his celebrated paper on hysteria, takes the position that they are analogous. Charcot takes the position that they are analogous, that the central trouble is the brain. Dr. Bauduy has just told us that in hemianæsthesia the trouble is in the brain, yet we have hemianæsthesia in uterine disturbance which is a practical contradiction of the view. In my paper I endeavored to prove that we ought to give a much broader significance to the term, or else restrict its meaning. Sir James Paget uses the term nervous hemicrasia, covering all those cases in which we have a simulation of organic disease, whether in males or females. He argues, and I think very justly, that in women we have the trouble more frequently

in connection with uterine and ovarian disturbance, because of the fact of the multiform relationship of these organs to the nervous system of the female; but that they bear precisely the same relation to the disease that a diseased joint or a diseased stomach does, only in a greater degree. Now we have hysterterical manifestations in women, in whom we can find no uterine, but also no ovarian disease, and we have the same class of phenomena in men. It would not do to say that in men it is limited (as Dr. Robinson seemed disposed to hold) to the generative organs. Here is a reflex disturbance from the irritation of the prostate, but we have men who think they have lizards in their stomachs, and we call that hypochondriasis; if it be a woman, we say she is hysterical. Wherein is the difference? I believe in such cases the trouble is in the central nervous system; that there is something in addition to the fact that some organ is at fault. I have a case in mind now of an old woman, who had never had hysteria in her life, yet during the past two or three weeks she has had marked hysterical manifestations. An examination was made, and there was nothing at all the matter with the uterus or ovaries. In men having hypochondriasis, in some it will originate from a diseased liver, in another, some stomach trouble or derangement elsewhere. Wherein does that differ from the uterine derangement in women that produces the same kind of abnormal sensations? It seems to me that they are strictly analogous. Then take M. Charcot's cases, in which he produces certain nervous phenomena by light thrown on the retina, by blowing in the faces of his patients, etc. That does not mean that he excites the nervous system through the uterus; it simply means that they have a peculiar organization that makes them susceptible to nervous impressions.

Dr. Gehrung then said that he would like to see hysteria defined about as follows: Hysteria is the expression of a peculiar nervous disturbance, dependent, generally, on disease or some disturbance of the generative—or perhaps pelvic—organs. Dr. Gehrung, thought that long-continued pains might cause this condition, and that long-continued pain, especially when "unperceived" or emanating from some ill-defined locality or insensible organ, might give rise to it. The expression "unperceived pain," he said, may seem a strange one, but we know from anæsthesia and sleep that pain may be present without being perceived; yet the impression on the nervous system must be the same, though less in degree. He held that long-continued pain would cause denutrition of

certain nerves and nerve centers, these again would produce vascular, muscular and psychic changes, the sum total of which would be hysteria. Further, the hysterical phenomena may also be produced, though exceptionally, by disease of extra-pelvic organs and even by independent disturbances of the respective nerve-centers. He thought that compression of the ovary acts, 1st, like a thumbscrew, by bringing the patient rapidly to a painful consciousness; 2d, like the "open sesame" of the mesmerist; and 3d, like the abdominal supporter in most painful chronic pelvic diseases, *i. e.*, by steadying and supporting the pelvic organs one against the other.

SELECTIONS.

QUININE AN ECBOLIC.[1]

I have just been called in to attend two cases of miscarriage in which premature excitement was brought on by the administration of quinine, as the history of the two indicated to my mind.

Mrs. ——, æt 35, multipara, had been having chills for a day or two, when she took a "large dose of quinine" in the morning for the third chill. In about three or four hours she had a slight chill with subsequent fever, and in a short time decided labor pains. These were only partially checked with opium and viburnum, and the following morning she gave birth to an eight-months child.

But a day or two after the preceding, I was called hurriedly to see a lady who was threatened with miscarriage. She, too, had taken two or three "large doses of quinine" for the purpose of breaking the chills. The next day after taking the medicine labor pains commenced: for half a day and a night she was kept on opium and "black haw," with directions to let me know if they did not cease. I made known to the family that she

1 [Those who have read Dr. Watts' communication on "Is quinine an Oxytocic, p. 416, present number of COURIER, will perceive by this selection that there are differences of opinion on the subject. If quinine is indicated in pregnant women, we would give it in small doses, often repeated, in combination with opium.—ED. COURIER.]

would certainly miscarry if those remedies did not quiet the pains. The next morning they came, but being away from home that day the messenger did not find me; however, upon my next visit, she had so far recovered as to lead me to feel no further uneasiness.

I believe it has been demonstrated by Hoffman, by experiment upon animals, that irritation of the hypogastric plexus produces motor activity of the circular fibres of the uterus. Upon this supposition the theory might reasonably be based that quinine, in addition to its general tonic action upon the spinal nervous centre, adds that property of being capable of so perturbing the normal equilibrium of involuntary functions as to bring about a deleterious termination.—*Atlanta Med. and Surg. J'l.*

THE NATIONAL BOARD OF HEALTH.

[The following act was passed by Congress since our last issue, and has become a law. It is not all we could wish for, yet it is a long step in the right direction. The contemplated Board is only advisory, but with its suggestions fortified by scientific facts and statistics, it will become a power. The rights of State and local Boards of Health are not supplanted or controlled, but are rather aided in acquiring and disseminating information on all matters affecting public health.—ED.]:

An act to prevent the introduction of infectious or contagious diseases into the United States, and to establish a National Board of Health.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled:

That there shall be established a National Board of Health, to consist of seven members, to be appointed by the President, by and with the advice and consent of the Senate, not more than one of whom shall be appointed from any one State, whose compensation, during the time when actually engaged in the performance of their duties under this act, shall be ten dollars per diem each and reasonable expenses, and of one medical officer of the army, one medical officer of the navy, one medical officer of the Marine Hospital Service, and one officer from the Department of Justice, to be detailed by the secretaries of the several Departments and the Attorney-General respectively, and the officers so detailed shall receive no compensation. Said board shall meet in Washington within thirty days after

the passage of this act, and in Washington or elsewhere from time to time upon notice from the President of the Board, who is to be chosen by the members thereof, or upon its own adjournments, and shall frame all rules and regulations authorized or required by this act, and shall make or cause to be made such special examinations and investigations of any place or places within the United States or at foreign ports, as they may deem best, to aid in the execution of this act and the promotion of its objects.

SEC. 2. The duties of the National Board of Health shall be to obtain information upon all matters affecting the public health, to advise the several departments of the Government, the executives of the several States, and the Commissioners of the District of Columbia on all questions submitted by them, or whenever, in the opinion of the board, such advice may tend to the preservation and improvement of the public health.

SEC. 3. That the Board of Health, with the assistance of the Academy of Science, which is hereby requested and directed to co-operate with them for that purpose, shall report to Congress at its next session a full statement of its transactions, together with a plan for a national public health organization, which plan shall be prepared after consultation with the principal sanitary organizations and the sanitarians of the several States of the United States, special attention being given to the subject of quarantine, both maritime and inland, and especially as to regulations which should be established between State or local systems of quarantine and a national quarantine system.

SEC. 4. That the sum $50,000, or so much thereof as may be necessary, is hereby appropriated to pay the salaries and expenses of said board to carry out the purposes of this act.

[After our editorial reference (in present number, page 402) to the "cold sound," the following will be read with interest and profit.—ED. COURIER:]

THE TREATMENT OF URETHRITIS BY THE APPLICATION OF COLD.—(John A. Wyeth, in *Hosp. Gazette.*) I do not believe that this, "The German Method," is practiced so generally as it should be. After trying it in the following cases I can heartily commend it to the profession. The apparatus consists of a double catheter closed at the vesical end. At the other end there are two nozzles for the attachment to the rubber tubes, one for the inlet and outlet currents. Each of these tubes is attached to a tin vessel holding about two quarts of water. The water is brought to between 30° and 40° F. by addition of ice. (It is not necessary to make it uncomfortable for the patient.) Hav-

ing introduced the catheter, the tubes are attached, one of the vessels being elevated and the other set on the floor, and the stop cocks are turned on. If necessary to prolong the *séance* the position of the vessels can be reversed and the water will flow back into the empty vessel. The application may last from one to ten minutes, as the peculiar character of the case may require.

Ten cases are detailed in which this method was employed with uniform success, and this success has impressed the writer with the great value of the method. It is almost painless in its application, and more rapidly successful than any other method he has yet tried.—*Mich. Med. News.* E.

OBITUARY.

Professor George B. Wood, M. D., died March 30th, in the eighty-second year of his age. He was confined to his house for the past four years, and had not been able to leave his bed within the last two years. He was born in New Jersey, educated at the University of Pennsylvania, where he graduated in 1815 as A. B., and in 1818 as M. D. He held a professorship as early as 1822, and remained a teacher of medicine forty years, occupying respectively the chairs of Chemistry, Materia Medica, and Theory and Practice of Medicine; being connected with the College of Pharmacy till 1835, and the University of Pennsylvania till 1860.

As an author he is best known in connection with the U. S. Dispensatory, which he first issued, in connection with Dr. Bache, in 1833. It has been exceedingly popular, having gone through thirteen editions, the last in 1870, of which 150,000 copies were sold.

In 1847 he published a Treatise on the Practice of Medicine, which ran through six editions. In connection with which, who does not remember his advocacy of turpentine in typhoid fever?

In 1856 he edited a Treatise on Therapeutics, in two volumes. It ran through three editions.

Besides, he issued volumes of lectures, addresses, biographical memoirs, a history of the Pennsylvania Hospital, a history of the University of Pennsylvania, etc. etc.

In 1865 Dr. Wood endowed the Auxiliary Faculty of Medicine in the University of Pennsylvania, consisting of five chairs: Zoology and Comparative Anatomy, Botany, Geology and Mineralogy, Hygiene, and Medical Jurisprudence; all of these subjects to be considered in their relation to Medicine.

At the time of his death he was President of the College of Physicians, and President of the American Philosophical Society.

Taken all in all, a proud record, in which we find great things done for Medicine, and a life of labor which we may well emulate. His "was a notable instance of professional zeal and devotion that lasted unabated through the decline of life, and amid the infirmities of advancing age."

John M. Woodworth, M. D., Surgeon-General of the United States Marine Service, died at Washington, March 14th, 1879, *æt.* 42 years, of typhoid pneumonia and erysipelas. He was in the active discharge of his duties up to within a week of his death. Born in New York State; graduated at the Chicago Medical College in 1862; immediately entered the army, and was with Sherman in his march through Georgia; brevetted Lieutenant-Colonel; after the war settled down in Chicago in private practice; in 1871, appointed Supervising Surgeon-General of the Marine Hospital service; gave special attention to general hygiene, and proved himself eminently qualified for the responsible position he held. His death is a loss to the Government and to the profession.

Dr. Bernard F. Mullen, of Terre Haute, brother of Dr. A. J. Mullen, of this city, died in Indianapolis, February 6th, 1879, aged 54 years. Dr. Mullen came of a family noted for their versatility of talent, and in his own person united varied and unusual gifts. He was a clever poet, an eloquent speaker, a brave soldier, and an accomplished surgeon. He served both in the Mexican and late wars—in the first as surgeon, and in the second as a colonel of a regiment. His untimely death was deeply deplored by the profession and people of his State.

NOTICES.

THE MISSOURI STATE MEDICAL ASSOCIATION will meet at Columbia, Mo., Tuesday, May 20th, 1879, at 10 A. M.

It will be observed that the *place* of meeting has been changed from Sweet Springs. This was rendered necessary, as the S. S. Hotel would not be open (and thus no accommodations be had) until a month later than the time appointed by the By-Laws of the Association for its meeting.

E. W. SCHAUFFLER, President.
A. J. STEELE, and G. A. MOSES, Recording Secretaries.

In the last number of the COURIER we indicated the necessity of the change that has been made, as above. It will be a great disappointment to many that we shall not convene at the place that had been determined upon, especially to those physicians living convenient to Brownsville. The proprietors of the Sweet Springs Hotel exceedingly regret to have so disappointed the Association, and would have been glad if the meeting could have been postponed one month later, *i. e.* until June 17th, at which time they would have been opened; in fact to this end they have been laboring zealously, but it seems the By-Laws of the Association would not permit such change of time. It was not, however, necessary to go a-begging for a place at which to meet. The invitation of Columbia, made so earnestly a year ago, was still open, and the officers could do no better than accept it. May a full attendance and a profitable meeting demonstrate the wisdom of their choice. Ample accommodations will be furnished for all the members, and the rooms necessary for the business of the Association will be tendered in the buildings of the State University. The season of year will be most propitious to an enjoyable time.

Judging from a few of the last annual meetings, it is evident the State Medical Association is beginning to bear fruit. Its sessions are well attended, its transactions are creditable; by its advice and encouragement, local medical societies have been organized in different parts of the State, and an acquaintance and fraternal feeling has been engendered between members of the profession in various sections. But the good work has only begun. There are many matters of general interest to the entire profession that should receive such attention and hearty co-operative action as only a State society can give.—[ED. COURIER.

THE AMERICAN MEDICAL ASSOCIATION will hold its thirtieth annual session in the city of Atlanta, Georgia, commencing Tuesday, May 6th, 1879, at 11 A. M.

Of late years Missouri has been well represented at the meetings of the National Association, and profit has certainly accrued to the delegates who have taken the time and trouble to attend. We trust this year will be no exception, but that a large delegation from this and adjoining States will go on. The season of year is most propitious. Atlanta is a beautiful city, and we all know well what southern hospitality is, and too, the railroads are holding out strong inducements in the way of reduced rates. The fare from St. Louis to Atlanta and return (round trip) has been placed at $28—just one-half the usual rate. With a sufficient party made up, a through sleeper will be placed at the disposal of the delegation.

MORTALITY TABLE.

CITIES.	ESTIMATED POPULATION.	DEATHS DURING THE PAST MONTH.	DEATH RATE PER 1000 LIVING.	
			FOR PAST MONTH.	FOR PAST YEAR.
New York	1,093,171	2,260	26.78	23.42
Philadelphia	876,118	1,256	18.77	21.57
Brooklyn	564,448	886	20.40	20.15
St. Louis	500.000	425	10.88	12.00
Chicago	460,000	533	11.60	16.50
Boston	375,476	605	22.09	20.10
Cincinnati	280,000	418	19.46	15.81
New Orleans	210,000	346	21.41	

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.	METRIC. Gms.
♏i. or gr. i. equals	.06
♏xv. or gr. xv. equals	1
ʒi. or ʒi. equals	4
fʒi. or ℥i. equals	32

The decimal line instead of points makes errors impossible. A teaspoon is 5 Gms.; a tablespoon, 20 Gms.—*Metric Bureau.*

ANNOUNCEMENTS FOR THE MONTH.

HOSPITALS.

CITY HOSPITAL, corner Linn street and Lafayette avenue—D. V. Dean, M. D., Superintendent in charge. *Clinical Lectures.*—MONDAYS, A. M., 9 to 10, Prof. Robinson, medical; 10 to 11, Prof. Lankford, surgical; 11 to 12, Prof. Michel, eye. WEDNESDAYS, P. M., 3 to 5, Prof. Smith, medical; 4 to 5, Prof. Hodgen, surgical, and Dr. J. Green, eye. THURSDAYS, A. M., 9 to 10, Prof. Bauduy, nervous system; 10 to 11, Prof. Lankford; 11 to 12, Prof. Michel. SATURDAYS, same as Wednesdays.

ST. LOUIS MULLANPHY HOSPITAL, corner Grand avenue and Montgomery street—In charge of the Sisters of Charity. *Clinical Lectures.*—TUESDAYS, A. M., 9 to 10. Dr. Pollak, eye, and Dr. G. A. Moses, diseases of children; 10 to 11, Prof. Gregory, (and Dr. Carson,) surgical; 11 to 12, Prof. Boisliniere, (and Dr. Moses,) diseases of females; 12 to 1. Dr. Glasgow, diseases of throat and chest, (and Dr. McCabe, medical). SATURDAYS, same as Tuesdays.

ST. JOHN'S HOSPITAL, corner Twenty-third and Morgan Sts.—Conducted by Sisters of Mercy. *Clinical Lectures.*—MONDAYS, A.M., 10 to 11, Dr. (Prof. Adj't.) Shaw, medical; 11 to 12, Prof. Prewitt, surgical; P. M., 2 to 3, Prof. Todd, diseases of the ear and throat, and Prof. Kingsley, diseases of children; 3 to 4, Prof. Papin, diseases of women. TUESDAYS, A. M., 10 to 11, Dr. Shaw, medical; 11 to 12, Prof. Prewitt, surgical, and Prof. Michel, diseases of the eye; P. M., 2 to 3, Prof. Kingsley; 3 to 4, Prof. Papin. WEDNESDAYS, A. M. 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Todd. THURSDAYS, A. M., 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Kingsley; 3 to 4, Prof. Papin. FRIDAY, A. M., 10 to 11, Dr. Shaw; 11 to 12, Profs. Prewitt and Michel; P. M., 2 to 3, Prof. Todd; 3 to 4, Prof. Papin. SATURDAYS, A. M., 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Kingsley.

ST. LUKE'S HOSPITAL, Tenth and St. Charles streets—*Episcopalian.—Clinics—Dispensary.*—MONDAYS, P. M., 2 to 3, Dr. J. Green, diseases of the eye and ear, and Dr. Wm. Porter, diseases of the throat and lungs; 3 to 4, Dr. Barret, diseases of women. TUESDAYS, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel, diseases of children. WEDNESDAY, P. M., 2 to 3, Dr. Green. THURSDAY, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel. FRIDAYS, P. M., 1 to 3, Drs. Green and Porter; 3 to 4, Dr. Barret. SATURDAYS, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel.

ALEXIAN BROTHERS' HOSPITAL, Corner Jefferson Avenue and Osage Street.—*Clinics.*—Daily, at 10 A. M., Dr. Wesseler, medical, and Dr. Lutz, surgical.

INFIRMARIES.

ST. MARY'S INFIRMARY, 1536 Papin street, under the charge of Sisters of St. Mary.—*Clinics.*—Daily, A. M., 9 to 10., Dr. Yarnall, diseases of women and children; 10 to 11, Dr. Holland, general and orthopedic surgery; 11 to 12, Dr. Hypes, medical. MONDAYS, WEDNESDAYS and FRIDAYS, 12 to 1, Drs. Gebser and Frazier, diseases of the eye and ear; 4 to 5, Dr. Stuever, diseases of the throat; TUESDAYS, THURSDAYS and SATURDAYS, P. M., 1 to 2, Dr. Hardaway, diseases of the skin.

MISSOURI EYE AND EAR INFIRMARY, 109 N. Eighth street—*Clinics.*—Daily, P. M., 1½ to 3, Drs. Gebser and Frazier, diseases of the eye and ear.

SOCIETIES.

ST. LOUIS MEDICAL SOCIETY, Polytechnic Building, corner Seventh and Chestnut streets, meets Saturdays, from 8 to 10 p. m. Papers are read, morbid specimens exhibited, cases related, and discussions had.

MEDICO-CHIRURGICAL SOCIETY, 1615 Washinton Avenue, meets on the second and fourth Monday of each month, from 8 to 10 p. m. Morbid specimens, cases and discussions.

ST. LOUIS OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY meets Thursday, April 17th, at 8 p. m., at Dr. C. L. Boisliniere's, 2301 Chestnut Street.

ST. LOUIS
COURIER OF MEDICINE
AND
COLLATERAL SCIENCES.

VOL. I. MAY, 1879. No. 5.

ORIGINAL ARTICLES.

LATERAL DEFLECTION OF THE NASAL SEPTUM.

BY A. J. STEELE, M. D., ST. LOUIS.

I PREFER the term "deflection" as expressing the condition to be briefly noticed, rather than that of "distortion" or "displacement," for this peculiarity of the septum nasi is a bending or bulging (with redundancy of tissue) rather than a twisting or dislocation.

It is a deformity rarely congenital, but usually resultant from a traumatism—as a blow upon the nose. The injury at the time may be apparently insignificant, the extreme deformity that appears at a later day having come on gradually. Dr. Carl Michel, of Cologne, says: "The cartilagenous part of the septum is largely exposed to external violence and can be easily injured. Thus the very frequent deformities (inclined positions of the nose) noticed even externally, may mostly have been brought about in this manner."

The septum acts the part of a buttress or prop, which, like any column thrown out of line, tends to an increased lateral leaning or bending. This is especially true in the

case of children and youth with whom the tissues of the nose are so impressible that, without a tendency to straighten when once deflected, a slight blow may eventuate in serious deformity. In the case of adults it is different; with them the parts are so hard and firm that the full impress of a blow is not only sustained, but also retained without special tendency to aggravation.

Deflection of the septum carries with it more or less deformity of the whole organ—the symmetry of the nose being lost by a tilting or leaning to the side opposite that to which the septum is bulged. A settling-in or flattening is also more or less marked in most cases. It is this external marring of the features, more than the internal discomfort, that prompts the subjects, especially adults, to seek relief at the hands of a physician. And yet, the subjective inconvenience is not trivial, for the cavity of that nostril into which the septum is bent is partially or entirely occluded, thus interfering with the passage of air and mucus, exciting catarrh, and possibly ulceration just where the septum and wall come in contact. This obstruction to the passage of air induces snoring and imparts a nasal sound to the voice.

If the subjects of this affliction consult the physician with an idea that a polypus fills the cavity, inspection quickly dispels such thought; for while the one nostril is occluded by a firm, lively-red obstruction, the opposite one is unduly patulous—the canal being enlarged by the concavity of the septum. This deflection of the nasal partition is usually confined to the catilagenous portion, but may involve the vomer or bony part. In such case the external deformity is greater, being resultant of a severer blow, and attended with increased loss of median support.

From observations on the living and dead, I am forced to believe that deflected septums are quite common, varying greatly in the degree of bending, rarely, however, existing in the extreme, but when so, attributable to external violence. The mild form is not attended with special inconvenience.

The measures of relief for this deformity may be classed under two heads: First, the cutting out or cutting off the projecting portion; second, the straightening by force, or bending back into line the deflected part, and there retaining it until healed or fixed permanently in its improved position. The first method is destructive and removal, the second, conservative and retentive.

The first may be accomplished with a curved bistoury, *slicing off* the projecting knuckle. If a sufficiency is removed to be beneficial, of course the septum will be cut entirely through, and thus an opening be left between the nostrils. Or, small, sharp-pointed, curved scissors can be readily used to *cut out* the offending part—one blade transfixing the septum. Dr. Goodwillie, of New York, has successfully used the dental drill, revolving at great speed, to cut out a circular piece. Others have thought to retain an intact partition by first dissecting and holding up the mucous membrane, then removing the underlying cartilage, after which, bringing the membrane down again, stitching it and—hoping for union. The first three of these operations designedly make an opening in the septum, the latter one is apt to do so from inability to adapt the flap, and from sloughing.[1]

I strongly advise against this, the first method of operative relief, for the cut edges of the cartilage are slow to heal, and in scrofulous, ill-conditioned subjects, take on a chronic ulcerous state, difficult to cure and with a tendency to spread; the scabbing and soreness inducing a pitiable condition. Besides, the purposes of the septum are best conserved when it is retained in its integrity; if one of its objects is to sustain, then certainly when weakened by loss, though partial only, of its substance, its supporting power is impaired and external deformity induced. Again, an opening in the septum subjects the patient to the peculiarity of a whistling sound in nasal respiration, especially if one nostril is entirely or partially occluded, as would result

1 In a case falling under my observation where this operation was done, the result was not altogether satisfactory. The mucous membrane, if ever safely brought down had sloughed, leaving a good sized foramen.

from catarrh. The cause of this sound is the same as where air is blown across the lip-hole of a flute—part passing over the opening, part passing into or through it.

These are results to be deprecated, and if in operative interference they can be avoided, they should be. It may be urged that with some persons there normally exists a perforate septum without marked inconvenience, and in some cases without their knowledge. I have seen such; and, strange to say, could not always trace the causes; congenital origin, however, suggests itself. These openings were in the cartilagenous portion, with rounded edges; when large, support was lost and external deformity apparent; when small, the whistling was probable.

In the second method of operating, a pair of strong, flat-bladed forceps is used to break, crush and straighten the deformed septum, one blade being introduced into each nostril; this is followed up by a clamp which seizes and holds the septum in its improved and straightened position, and which is worn for several days, or until the tendency of the parts to immediately return to their deformed condition has ceased, then replaced by tight-fitting plugs, worn for a number of days, or until the corrected state is permanent. As an improvement on this plan, it has been suggested that incisions be first made into the septum, it thereby being weakened and thus the more readily straightened; where, being retained by plugs, the cut edges unite, and thus the improved position is permanent and the partition intact.

The plan of removing by oblique incisions a small portion of the redundant septum, sufficient to allow it to come into a straight line, where, being retained with the cut edges together, with the hope that they will unite and thus effect a cure, has been proposed, and was adopted in several cases (so reported to me) unattended, however, with good results.

When in Philadelphia, at the International Congress, Mr. Wm. Adams, of London, showed me forceps, screw-compressor, and plugs, devised and successfully used by himself for the relief of this deformity. The forceps were

strong, with flat, parallel blades (plate-bladed). The retentive apparatus, or screw-compressor, consisted of two flat blades joined at the shank or handle by rivet and modifying screw. The plugs, one for each nostril, were of ivory, and snug-fitting. I have operated by his (Mr. Adams') method, and have, I believe, improved on his screw-compressor, by substituting a clamp in which the two blades

FIG. I.—Clamp for Compression and Retention of Septum Nasi ; with Key.

are carried and retained parallel. The joint in the Adams apparatus is objectionable in that the blades are approximated or separated unequally.

I have used plugs of different shape and material—ivory, bone, vulcanite, ebony, etc. While the plug should fit tight laterally, it should also, if possible, be self-retentive. Trouble has been experienced by it popping out, necessitating the use of adhesive plaster or other means to retain it. This, which is inconvenient and inefficient, can be avoided by giving to the upper anterior corner of the plug an abrupt turn—an acute angle, which, fitting into a little pocket, or

FIG. II.—Plug for Nostril.

sulcus, existing just in front of the outer nasal opening, keeps it from obtruding.

I am not partial to the crushing method of Mr. Adams, preferring rather the plan of weakening by incisions the deformed septum previous to re-positioning it. To accomplish this effectually and rapidly, I have devised and successfully employed an instrument, consisting of forceps

somewhat similar to those of Mr. Adams, on the inner surface of one of the flat blades of which are attached several cutting edges, like narrow knife-blades, perpendicular to the surface, and crossing at a common centre, one-eighth or three-sixteenth of an inch in height, varying according to the thickness of the cartilagenous septum to be cut. This thickness is influenced by the age of the patient. The opposite blade is faced with copper, against which the cutting edges may impinge without injury.

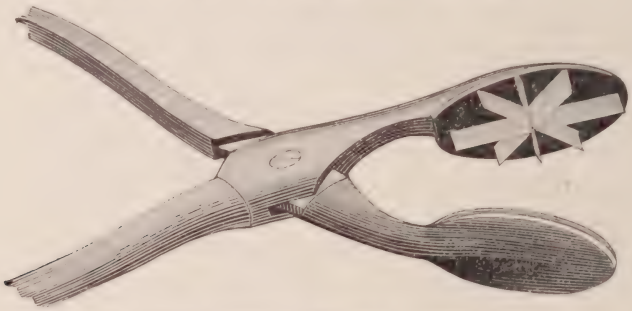

FIG. III.—Forceps for Incising the Septum Nasi.

The blade with the cutting plates is introduced into the expanded nostril, as being more roomy, the other, or flat blade, into the occluded nostril. When in proper position, which is such that the point of crossing of the cutting edges is opposite the point of greatest deflection of the septum, the handles are firmly approximated, whereby eight cuts are at once made, quite through the cartilage, radiating from a common centre, and forming the same number of angular points (of 45° each), which, the forceps being removed, can be bent or broken at their bases and carried towards a straight line, and there readily retained by plug, such as referred to above.

The cut edges will override, and thus allow of the straightening; being held, union occurs, and there is neither tendency nor power to return to the bent position; and the septum remains in its integrity, without a foramen. The idea will readily be had from the following: This curved line cannot be bent straight without further separation of

points *a*, *b*, but divide it through its centre, *c*, as below, and over-riding of the cut edges will allow of straightening.

The operation is so brief that an anæsthetic is not requisite; if it should be desired, nitrous oxide gas is sufficient, and can be administered without danger of blood being drawn into the larynx.

Immediately after the cutting, the parts are bent over by the finger or forceps to the opposite side, and so retained by a large plug introduced into the narrowed nostril, and thus worn for a number of days, or until union is firm, and the tendency to return ceases. At first it were best to retain it several days without removal, unless briefly to clear out mucus. At the close of the treatment it need be worn only at night.

Mr. Adams advises in his operation a plug in each nostril. In my experience one answers the purpose, thus leaving the opposite nostril free for air and mucus. I find that a hole through the plug to allow the passage of air is impracticable, as it soon becomes stopped up by the secretions.

The little cutting blades of the instrument are best made from a single piece of steel, filed out and sharpened, and are readily attached to the flat surface of the forcep blade by even soft solder. It holds sufficiently well, and can readily be loosened by exposure to a spirit lamp, should occasion require the use of the plain forceps; for example, if the bony septum far back needed crushing. The blades of both forceps and clamp are so made that when closed a free or open space is left at the shank; this prevents impinging of the little triangular cartilage between the opening of the nostrils.

To protect also the opening of the nostril from laceration during the introduction and removal of the cutting blades, they may be shielded by a spatula. And I might say just here that the instrument should be as large as can readily be admitted into the nostril, the size varying for youth or adult.

Some sixteen months since, I operated with the instrument, and in the manner just described. The result, as observed at this late period, is eminently satisfactory. The nose, which was deformed, and with an increasing lateral tendency, is now perfectly straight. The septum, which was so deflected as to very nearly occlude the entire nostril, is now intact in the middle line, without foramen. The previous constant discharge of mucus has entirely ceased.

"Broken noses" may be divided into two classes, one where the cartilage alone is at fault, with slight external deformity; the other where the bones are involved, attended with marked deformity. In the latter case the bones may be broken, by strong forceps, from their deformed position, re-positioned and retained by external as well as internal apparatus. Mixed cases may require both cutting and crushing operations.

The strong plate-bladed forceps find use here, after which the clamp and plugs,—one plug for each nostril. External appliances take leverage from the forehead, to which they are attached by a band around the head. One or two padded blades push upon the outside of the nose with a degree of force and in such direction as required. Mr. Adams has largely perfected this appliance.

NEW METHOD IN THE TREATMENT OF ACUTE CYSTITIS, OR OF ACUTE EXACERBATIONS OF CHRONIC CYSTITIS IN WOMEN.

By Eug. C. Gehrung, M. D., St. Louis.

THE treatment of acute cystitis and of acute exacerbations of chronic cystistis is frequently sounsatisfactory that any additional means that promises to shorten the disease or to alleviate the suffering necessarily connected with it may not be unwelcome.

I regret that this plan is not of universal applicability—since it excludes the virgin—and that I cannot at present offer more numerical proof of its usefulness. The communication of this paper on such insufficient data is prompted by the supposition that, if I waited until I should be enabled to report such a number of cases that would be indubitable proof, it might, on account of the rarity of these cases in private practice, perhaps never have made its appearance. While, with the coöperation of my worthy colleagues, this proof will not be long wanting; or, on the other hand, the worthlessness of the method will be established at an early period.

On the 29th of August, 1877, I saw Mrs. B. R., *æt* 33, married, mother of two children, who, on the previous night had had a chill, succeeded by an almost constant desire to urinate, accompanied by intolerable pain and scalding of the bladder and urethra during and after micturition. Temperature and pulse were nearly normal. The urine soon became turbid, and finally fœtid and loaded with mucus and pus. There was great tenderness on pressure in the vesical region to vaginal and suprapubic touch. The position of the uterus was found normal. In the absence of any other known cause, the patient attributed her disease to "a cold." Yet there is reason to believe that there were some remains of a chronic cystitis present from a former attack six years ago, when, Mrs. R. informed me, after her first labor, the frequent introduction of the catheter, during several days in succession, became necessary on account of retention of urine from compression of the urethra, and, in consequence of, or subsequent to, this catheterization, the cystitis developed. She suffered then severely for about six weeks, though under good medical care.

I subjected her to the treatment usually recommended in such cases: Rest, anodynes, alkaline diluent drinks, carefully regulated diet, baths, poultices, revulsives, vaginal suppositories, etc.

The symptoms progressed, however, from bad to worse, so that the patient was unable to leave her bed, and while

there she had to use the vessel every few minutes, day and night, with considerable tenesmus and pain. The suffering and loss of night's rest, for four or five days, affected her general condition markedly.

Something had to be done to bring on a change. Frequent or permanent catheterization, as well as injections into the bladder, would have been of doubtful propriety, if not absolutely dangerous. To try some of the many vaunted "specifics" would have, at least, entailed a loss of time.

While contemplating what plan of treatment would offer the best prospect to relieve the suffering and danger to which my patient was subjected, the question of *rest* arose uppermost in my mind. Rest, by compression and support of the bladder; rest, by elevation of the bladder, analogous to the suspension of the testicle in orchitis, the breast in mastitis, etc.; rest, by preventing the sagging of the bladder and the accumulation of residual urine, etc.

The indications being thus mapped out, the plan of treatment to be followed to fulfill these indications presented itself at once, especially since I had met with such good results in a considerable number of cases of chronic cystitis, dependent on uterine anteversion, by the use of appropriate anteversion pessaries. The extreme tenderness of the bladder, on vaginal touch, precluded the idea of inserting a solid pessary.

I filled, therefore, the vagina with dry cotton batting by surrounding the uterine neck with a few small wads of this substance. This was followed by a large wad or two, thoroughly compressed between the fingers to facilitate the introduction into the vagina, where, when let loose, it would enlarge by its inherent elasticity and fill this cavity. Thus, after careful adjustment of these wads, the bladder would be elevated and compressed against the pubes and abdominal walls, so to speak, between two elastic media.

The result surpassed my expectation. The patient expressed herself as decidedly relieved, and, rising upon her feet, felt very comfortable. In spite of my remonstrances, she remained up, and by degrees began to do some light house work.

At my evening visit she reported to me that for the first three or four hours after the application of the cotton she felt perfectly well, and had to micturate but once or twice, and with much less pain than before, while during the latter three or four hours she experienced a gradual return of all the former symptoms.

Upon examination I found the cotton more or less matted by the vaginal secretions, and insufficient to sustain the bladder satisfactorily. Upon removal of the plug and application of a fresh one, she felt the same relief as after the first and passed the night comfortably, rising only twice for micturition.

The following morning the urine appeared much clearer, and on account of the diminished quantity of mucus it flowed easily from the vessel, although after she got out of bed she perceived again a partial return of the former difficulty. The cotton this time was not so wet as before, a circumstance which I have frequently noticed after repeated applications of large plugs of dry cotton to the vaginal mucous membrane for other purposes, namely, that the vaginal secretions diminish in consequence of these applications.

To test the value of the treatment, and for the purpose of finding out the degree of support necessary to give the requisite relief, I applied, without the knowledge of the patient, a much smaller plug than heretofore. But ere long a message was received to come and replace the cotton, as she was not relieved at all.

The re-application and adjustment of the packing, as on previous occasions, was crowned with the same beneficial result as then. She always felt best soon after the packing.

At first, two or three repetitions of this treatment were necessary during the twenty-four hours to keep her comfortable; afterwards, one or two, and on the fifth day after the beginning of this method no more applications were made, and the patient has remained well ever since.

From the commencement of the use of the cotton all medical treatment, local and general, was stopped, except diet.

I am well aware that I may be accused of drawing conclusions on insufficient data, having but one case on which to base my deductions, yet I hope to justify my position by the following:

1. The result corresponded to my preliminary reasoning based upon my experience with cases of chronic cystitis.

2. The result of the crucial test to which I have submitted the treatment, namely, the return of the symptoms on matting, removal or imperfect adjustment of the packing, and the disappearance of these on a correct re-application of the latter.

3. The difference in duration between this and the former attack.

4. The apparent uselessness of the customary treatment and the prompt relief by this.

In the November number for 1877, p. 508, of the *Monthly Abstract of Medical Sciences*, appeared an abstract of a paper on "Chronic Cystitis in Sacculated Bladder," which shows that similar thoughts to the foregoing have been entertained elsewhere, although for a somewhat different purpose. From it I extract the following:

The President of the Parisian Medical Society, Mr. Duchaussoy, describes a case of rebellious, purulent chronic cystitis, with sacculation of the bladder, in a male subject, in which he introduced into the rectum, for the complete evacuation of retained pus, "a small hollow India-rubber plug, somewhat resembling a pessary. * * * Another advantage obtained from the use of the rectal pessary is, that it supports the floor of the bladder, and thus resists distension of the vesical walls during efforts at micturation. * * * * The introduction and retention for a short period—an hour or so—of the rectal pessary has not been attended by any serious inconvenience."

It may be asked why I did not use inflated rubber pessaries instead of the cotton, or, whether these would not be efficient substitutes?

My answer is, that I believe not. The definite shape of these pessaries precludes their perfect adaptation. Certain

parts of the bladder would be unduly compressed, while others would be incompletely sustained. It is essential to success to elevate the entire posterior wall of this viscus, smoothly and evenly.

If this plan of treatment should fail in other cases to produce the above mentioned beneficial results, it has the advantage of being perfectly harmless. It is under perfect control, as it can be removed at any moment. It does not prevent any other mode of treatment that may be decided upon, and it relieves the urgent symptoms more promptly than other means. Should the uterine neck or body compress the bladder, in cases of acute cystitis, this would again be the most appropriate means for the temporary removal of such compression.

A year and six months having elapsed since the substance of the above was presented to the Obstetrical and Gynæcological Society of St. Louis, I shall now append a few selected cases, with remarks upon my previous and subsequent experience with this plan of treatment, for the purpose of illustrating some of the points mentioned in it.

Case I. On April 21st, 1873, I took charge of Mrs. L. V., aged 40 years, who had then been under treatment four years for chronic cystitis. Her last attendant in this city, a prominent and very able surgeon, after having exhausted all the usual means to his disposition, proposed, as a last resort, to make an artificial vescio-vaginal fistula. This frightened the patient so, that she left not only the hospital, but also the city, to join her husband and family in Denver, Colorado—where I was then practicing—with the determination to let the healthful climate of Colorado work miracles. She discovered soon, however, that her hopes were blighted, and like so many others who expect the impossible from that climate, had to put herself again under medical care. For two years Mrs. V. was thus treated by different physicians for vesical or renal disease, with no beneficial result. When I met her, at the above mentioned date, she was indeed an invalid. For several years she had been unable to walk or stand straight, and even while sitting she could not, on account of pain in the pelvis, raise her arm high enough to put up her hair. Her urine "looked more like soft soap than anything else."

I made a careful examination, and found the uterus anteverted in the second degree, somewhat enlarged, endometritis, and tenderness of the pelvic organs, especially of the bladder. Examination of the urine gave negative results as to disease of the kidneys.

I promised to visit her the next morning, and directed her to count how many times she had to rise during the night to micturate. At my next visit Mrs. V. informed me that she counted forty-nine times during the space of two hours, and after that she was too tired to continue the counting. I then replaced the womb with one of my anteversion pessaries (See Fig. 1), which, as I shall show below, not only replaces the anteverted womb, but also elevates and supports the urinary bladder. After rising from the operating table, the patient was able to stand perfectly erect and raise up her arms as high as she ever could in her life. She was also able to walk erect without support of her hands, and with very little pain. During the ensuing night she had to empty the bladder but from ten to fifteen times, and enjoyed, as she said, "a good night's rest."

Thus she continued to improve up to the 4th day of May, when she micturated but once or twice during the night; nothing more having been done for her than to administer chalybeate tonics and to make the necessary uterine applications to remove complicating difficulties existing there.

At this juncture I left the city for the space of three weeks, and on my return found her the head of a boarding-house, doing, as she and her husband assured me, the cooking and washing for thirty guests. On the 10th day of October, 1874, I delivered her of a well-developed male child. She remained a perfectly healthy woman for years after, to my personal knowledge, and probably so to this day.

Remarks: I report this as one of many similar cases, to show that the elevation of the womb and bladder is all-sufficient for a cure in most cases of chronic cystitis, provided that the cause or causes in most cases are thereby, or simultaneously, relieved; and, further, to show that in such cases solid pessaries can generally be used at once, and with advantage.

Case 2, February 5th, 1878, Mrs. W. C., who has been under treatment for one month for ante-flexion of the

womb, etc., and progressing favorably, exposed herself imprudently a few days ago to a cold and damp atmosphere. The consequence was, that she became feverish during the night, and next morning began to complain of a "cold in the head," and pain in and tenesmus of the bladder. This pain in the bladder she wrongly attributed to the (anteversion) pessary she was then wearing. To please the patient, and for the sake of experiment, I removed the latter. Still micturition became more frequent and painful; mucus and finally blood made their appearance, and the erect position was almost unendurable.

The cotton tampon was now applied, as above described, at 10 A. M., and repeated at 5 P. M., when all the symptons had diminished in their intensity.

February 6th, A. M. There was still some blood in the urine passed during the previous night. P. M. No more blood. Passed urine but once since the packing of A. M.

February 7th, A. M. Feels much better. Instead of repeating the packing, I now re-inserted the pessary. After this, micturition became again more frequent and painful, and burning and straining returned.

February 8th, A. M. Repeated and continued the packing. After this the improvement progressed slowly and continuously, until the solid pessary could be worn again without the least inconvenience, by the 10th of the month.

Remarks: This case goes far to show that solid pessaries are not easily tolerated during acute cystitis, or acute exacerbations of chronic cystitis.

I have treated many similar cases since, with the same result. With great regret I am obliged to state that I have not since met any cases of that acute type, as the one that forms the body of this paper. Yet I have learned enough from these less severe cases, to convince myself that the method is based on sound principles, and that it will, ere long, give good results in the hands of others, if it has not done so already, as well as in mine.

Case 3. When first seen by me, Mrs. G. F. S., a married lady, aged 24 years, was in agony from an acute exacerbation of chronic cystitis. She suffered from such attacks frequently. All she wanted for the present was a night's rest, as she had long ago given up all hope for a cure, or even amelioration of her condition. A number of physi-

cians in Montreal, Chicago and St. Louis had tried in vain their skill on her. Among these I recognize the names of several acknowledged leaders in gynæcology, several of whom had proposed to make an artificial vesico-vaginal fistula, to which she refused to submit. At a later date, June 28th, 1878, she put herself completely under my care.

History: Married seven years; had leucorrhœa ever since her first menstruation. Suffered severely from the approaches of her husband; never pregnant. Habitual constipation. Six years ago Mrs. S. attended a dancing party and was troubled with a frequent desire to micturate. All her attempts to empty the bladder proved futile. Yet she continued to dance until she fainted, and was transported home. From this time dated all her misery. Menstruation became gradually less, while simultaneously blood appeared in the urine. For the last two years she menstruated vicariously by the bladder. She was frequently obliged to pull clots of blood and mucus from the urethra, which caused, when passing spontaneously or artificially, intolerable tenesmus and pain. This obstruction of the urethra by, and the passage of clots, I have repeatedly verified by actual observation.

The following is a condensed abstract from my record: "The mouth of the urethra and vulva highly irritated and very tender to touch. The ostium vaginæ contracted; barely admitting the index finger, and so sensitive as to resemble vaginismus. Vaginal, vesical and rectal walls much thickened and extremely tender to the touch. Uterus prolapsed and retroflexed, also exquisitely sensitive. Conjoined manipulation, the use of the speculum, or of the sound, was impossible.

"The diagnosis was chronic cystitis, caused by retroflexion of the womb, with vicarious (vesical) menstruation."

The indications for treatment were of course to antevert the womb and support it by a pessary. Even if I had been able to introduce a pessary, she could not possibly have tolerated it. So I managed to slip a few small wads of cotton into the vagina and to adjust them against the bladder. Yet this light pressure was at first tolerated badly. Soon, however, she began to feel easier, and at the next change of the cotton I was already enabled to use larger wads and adjust them more thoroughly. This was continued for about two weeks. Bromides at night.

July 17. Soreness is considerably diminished, so that a small retroversion pessary can be introduced to partially elevate the womb, and in addition some cotton.

July 29. "I felt better yesterday than for years; almost well. Am also feeling well to-day; no pain in the bladder or elsewhere." There was but little soreness on conjoined manipulation. Swelling of the bladder, etc., considerably diminished. Succeeded in anteverting the womb, and supporting it in that position. For some time no blood appeared in the urine, and on 16th she began to menstruate normally (four days) for the first time in three years. The urine almost clear.

Everything progressed favorably until I saw her for the last time, on September 2d, when she was apparently well.

A few months later I met her after her return from a long visit to Canada, when she appeared the picture of health, and informed me that she had never felt better in her life.

Remarks: From this case we see that though the misplaced uterus, the offending body, was not replaced, yet the cotton packing had the desired result in alleviating the pain and mitigating the other symptoms; and further, that though no solid pessary could be tolerated, the cotton packing served in paving the way for such, and in the meantime improved the case to such an extent as to give the patient full confidence in a final cure.

The cotton tampon or pessary treatment of cystitis should, as a general rule, not be used to the exclusion of other means, but as an auxiliary to those generally advised, as it is evident that cystitis, acute and chronic, may depend on various causes, which causes should be removed—if possible—by appropriate means, previous or simultaneous to the recurrence to this plan of treatment.

Within a short period of time a number of pessaries have been invented and brought before the profession, for the purpose of holding up the bladder in cases of cystitis caused by cystocele. Yet I do not think that any one of them is as simple or as complete for this purpose as the one used in the preceding cases, and which I introduced years ago under the name of an "Anteversion Pessary."[1]

All the others, as far as they have come under my notice, take their support antero-posteriorly, or from some point

1 See Report of Ter. Med. Soc. of Colorado, 1873, and *St. Louis Med. and Surg. Journal*, July 1877, and August 1878.

or appliance exterior to the vagina, to the great discomfort of the patient. The instrument I have described, (see figure 1), is completely intra-vaginal, and rests altogether

FIG. 1.—"Anteversion Pessary."

laterally and anteriorly, reaching from one side of the rectum to the other, without molesting it—a point of great importance—and presenting two horizontal bars to the posterior wall of the bladder. These bars may be joined together by a blade, if found necessary, so as to offer a solid wall for the bladder to rest against. Or, it may be made[1] from a piece of vulcanite one-fourth of an inch thick, one and one-fourth inches broad, and from three to five and a half inches long, according to the size that may be desired,[2] the corners rounded off as seen in Figure 2, and bent on the flat in the shape of a horse-shoe, by approaching *a* to *b*, (Figure 2), as indicated in Figure 3.

FIG. 2.

FIG. 3.

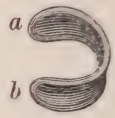

FIG. 4.

Figure 3 represents the pessary as seen from below. Figure 4, the same when finished, being the fac-simile of Figure 1, with the superior and inferior arches joined together by a blade.

For the purpose of lightness, the blade may be thinned considerably.

1 Messrs. Shepard & Dudley, of 150 William street, New York, have made them for me.

2 Each half-inch of the length represents one of the sizes of my pessary.

When I exhibited this instrument, three years ago, to the keen eyes of the late Dr. E. R. Peaslee, he remarked at once:

"This ought to be splendid for cystocele."

This remark was so much more acceptable, as it fully coincided with my previous experience.

This instrument not only upholds the bladder but also the womb, if anteverted or anteflexed, and therefore is a curative means for cystitis caused by either of these uterine deviations.

Even procidentia of the retroverted womb complicated with cystocele and rectocele has been frequently completely relieved by this instrument, in my hands as well as in those of others.

In regard to *Chronic Cystitis*, Dr. A. J. C. Skeene, in his valuable work,[1] page 204, says:

"With all the means of treatment yet described, you will be unable to cure some of your worst cases of Chronic Cystitis. Indeed, you will fail sometimes even to relieve the suffering. Such unfortunate subjects have usually been set aside as incurable, and even now we have cases which surpass our skill. But a great advance has been made in the treatment of those obstinate cases, by using measures to fulfill the chief indication in the therapeutics of inflammation—*rest*. The great trouble has been to secure sufficient rest to the bladder. Dr. Emmet has accomplished this by establishing a vesico-vaginal fistula, which maintains complete drainage. Relief is at once secured for the patient, and the inflamed and ulcerated surface, which is no longer fretted by the urine, heals up in the course of four or six months. The fistula is then closed by the usual operation. This may well be considered a great triumph of science, but unfortunately it is rather too complicated a measure to become general. Making a vesico-vaginal fistula, and then closing it, are operations easily performed by Dr. Sims or Dr. Emmet, with the assistance of trained hospital nurses; but many of you

1 Diseases of the Bladder and Urethra in Women, 1878.

would find it no easy task. Taking this view of the subject, that plan of treatment ought not to be tried until all other means have failed, and then only by those who have had practice in that department of surgery.

"At the Woman's Hospital of New York, where the best operators, skilled nurses, and constant care were had, the following results were obtained: Cystotomy was performed for the relief of cystitis in seventeen cases, of which four were cured and thirteen improved. * * * *

"It has been found that one great obstacle to cure by this method is the tendency which the artificial opening has to close. * * * *

"Another objection to cystotomy is, that while the patient is relieved from pain, she is made distressingly uncomfortable by the constant trickling of urine from the fistula."

This is a peculiar kind of *rest* that is produced by punching a hole in the center of an inflamed tissue or viscus, and by keeping this aperture patent by the introduction and retention of a foreign body!

It is easy to understand how such an operation may give rest when the morbid process is limited to the neck of the bladder, the urethra, or both. But not so easy when the disease is spread over the greater part of the viscus.

Would any body consider the result of a somewhat similar operation, that of thoracentesis with drainage in pyogenic pleurisy, etc., as being due to *rest?* I think not. The principle underlying both operations is drainage.

Can it be possible that the perpetuation of the vesical inflammation is caused by the occasional efforts of micturition? Or is the flow of healthy urine over the diseased surface perhaps the offending cause?

To me it appears rather doubtful that either of these "functions" of the bladder has much to do, either with the causation or perpetuation of this disease. I cannot imagine that the flow of healthy urine directly from the kidney at the temperature of the body should be anything but the most mild, most soothing application, for the

diseased as well as the healthy mucous membrane of the bladder, that could possibly be applied to it. The spontaneous healing of artificial vesical fistulæ under constant immersion of urine, speaks much in favor of this view. Likewise the more pleasant effect of mild salt water on other diseased mucous membranes than even pure water.

The belief of the laity in the healing power of fresh, healthy urine on diseased mucous membranes also points in the same direction.

Inflammation is a short-lived, morbid process, that is frequently prolonged or perpetuated by the continuance of its *causes* or its *consequences*.

In the majority of cases of chronic cystitis, the inflammation is evidently upheld by its consequences, namely: the spasmodic contraction of the neck of the bladder and urethra; caused by the spreading of the inflammation to these parts, or by the constant flow of irritant urine over them; and by the retention of some urine that becomes mixed with the pathological contents of the bladder, and is transformed itself into an irritant.

It is then by preventing this accumulation of pathological products mixed with decomposing urine that the beneficial results of cystotomy are obtained.

If my surmises are correct, and I believe I have probability in my favor, then the use of the cotton tampon appears to fulfill the therapeutic indication—*rest*, far better than cystotomy. It elevates the bladder, and enables it, even if its contractility be lost, to empty itself completely. The support and compression are also valuable factors.

When there is no nest of infection, the healthy urine, flowing over the diseased surfaces, acts probably as a depurator, and remaining sweet itself, may be retained a much longer time without causing irritation.

This seems to me to be illustrated by Cases Nos. 1 and 3, in both of which cystomy was proposed by competent surgeons.

The results obtained at the Woman's Hospital, of New York,—"under the best auspices"—appear not to disprove it.

I hope, therefore, that the operation of cystotomy may, in future, not be undertaken until the cotton tampon has had a fair trial.

CHRONIC LEAD POISONING FOLLOWING THE USE OF COSMETICS—WITH CASES.

By P. V. Schenck, M. D., *Resident Physician Female Hospital*, St. Louis.

THE word cosmetic is derived from the Greek verb *kosmeo*, I embelish or adorn. A pleasing face is the first letter of recommendation. By way of personal adornment, few practices are of more ancient origin than that of painting the face. The Scriptures tell us (2 Kings ix: 30) that the proud Jezebel, when preparing to meet King Jehu, painted her face. Jeremiah, iv: 30, says: "Though thou rentest thy face with painting, in vain shalt thou make thyself fair." The toilet of the voluputous Assyrians is described —that they underlined their eyes with antimony and their faces were painted with white lead. Xenophon informs us that Astyages had his eyes and face painted. We are told that Emperor Eliogabalus, as he entered the Eternal City, appeared with his face painted red and white. Savages, as they have existed all through history, have always delighted in painting or staining their bodies. Painting the face was a prevailing custom in the most debased days of Rome, and those equally vile years when the Grand Monarque ruled France; and it has acquired a prevalence in the fashionable world of to-day, worthy of the most effeminate days of the most effeminate nations. Cöhler and Schübler have shown that white flowers are the most fragrant and pleasing, while the orange and brown colors are of little use to the perfumer; so the ladies of to-day, in selecting cosmetics, consider white and red the most desirable. That re-

sult of the intermingling of the dark blood of the South with the fair Saxon, which we call freckle, they avoid and despise, hence there is no constituent of cosmetics so applicable as the carbonate of lead or what is commonly known as white lead. White lead overcomes the florid complexion produced by great exertion, it also overcomes the effect of artificial light, so trying upon the face at evening entertainments.

There is a peculiar, an extraordinary and an especial interest connected with lead poisoning. The metal is so slow in setting up its terrible power, that the ancients are said from that reason to have compared it to the God of Time and to have given it the name of Saturn. It is the more applicable when we think that that God was delineated under the figure of a serpent with its tail in its mouth, thus individualizing character and perpetuity.

There have been many who have denied the possibility of poisoning by the use of lead as a cosmetic. The skin, which is so complicated and yet so perfect, so delicate and yet so useful, combining as it does the powers of an organ of sense, of excretion, secretion and nutrition, has over it a protection, which they say prohibits the admission of any deleterious influence; and besides the epidermis, which opposes a strong obstacle, there is the sebaceous matter of the skin, which offers also a more or less positive obstruction to cutaneous absorption. They have in confirmation of their views the statements of the physicians of the Paris theatres, that actors who use white lead on the face never suffer from saturnine poisoning. Many surgical writers, who recommend the external application of lead, state that they have never observed lead colic as a consequence. Tanquerel says he confirmed this by investigation, and that the epidermis is an obstacle to the absorption of lead applied to the skin, and he further says, that science does not possess one single case of either paralysis or cerebral lead disease, directly produced by the application of lead to the dermoid system, when the epidermis was preserved, and that all cases reported to the contrary, are out-weighed by negative facts. But it must be born in mind that Tanquerel

experimented with acetate of lead, which is not a fair test by absorption, because it re-acts chemically on the albumen of the secretions and of the living tissue, and forms therewith compounds, which are for the most part insoluble in water and acids.

Those who advocate the use of lead cosmetics as harmless say that their opponents have become frightened, and that since Sir George Baker discovered lead in Devonshire cider, so numerous have become the ways by which lead is supposed to be taken, that one now can scarcely make his toilet, eat or drink from apprehension.

It is now generally admitted that absorption can take place from the general surface. The constitutional effects of medicines adminstered in this way are frequently as marked as when they are taken into the alimentary canal. Bauduy states, that a garlicky odor will emanate from the breath of a person to the soles of whose feet onions have been applied. There is no doubt that the sound skin becomes the avenue for the introduction of poisons by absorption, as seen in cases of arsenic, corrosive sublimate, lead and many other substances, which have occasioned serious and fatal consequences when thus applied, and after death have been detected in the tissues of the body, showing they had been absorbed.

When the epidermis has been removed, there are but few who question absorption. Galtier reports a case where a lead-plaster applied to an ulcer on the leg, occasioned chronic lead-poisoning. In the *British and Foreign Medico-Chirurgical Review*, (Oct. 1857), cases are given where the external application of white lead to a scalded surface as a dressing produced lead-colic. Percival reports a similar case. Sir G. Baker is confirmed by Duchesne and Taufflieb in the statement that the use of lead-cerate, on the denuded skin, will produce lead-poisoning. Taylor quotes a case of lead-paralysis of the right hand in a type setter—the sharp edges of the type caused abrasions of the thumb. With all this evidence, I am surprised that the ablest surgeon we have should, in his works, continue to

recommend, regardless of the extent of injury, the application of white lead in the treatment of burns. It is true that he never witnessed any bad effects, even though in one case he used it during five weeks, consuming more than a quart of lead. That such a recommendation should bear ill fruits must be expected, for Dr. Kinkler, of Madison, Iowa, in the *Medico-Chirurgical Review* reports a case of lead-colic produced by the white lead treatment of a severe scald, and he further stated that his attention was called to this treatment by a paper from this same learned professor, in the Transactions of the American Medical Association.

All preparations of lead are poisonous. Dr. A. T. Thompson considers, however, that carbonate of lead is the only poisonous salt of lead, the others becoming so by being first converted into carbonate of lead. There is a peculiarity about this poison that exists in no other; none is so constantly and insidiously introduced into the human system. Orfila states that it is a natural constituent of the body. Leprig found it in the liver and spleen of men when they had not been exposed to its influence, and Millon found it in the blood.

The next question is, how does lead act as a poison? When it has once entered the circulation, its means of entrance is immaterial to its future action. Some persons are especially susceptible to the effects of lead. Dr. Angus Smith refers to cases of lead-paralysis in which as little as 0.01 of a grain per gallon was in the water used, and Adams speaks of 0.01 of a grain causing poison. The quantity of lead taken in a single case has not so much effect in producing the disease as its continued introduction. The quantity of lead in the blood, at any one time, is comparatively small. Heubel says the maximum in the blood and internal organs, is 0.02 per cent. After lead has entered the circulation, it is either rapidly eliminated or may be deposited in the organs and tissues of the body. Reese says that the poison is active only while circulating in the capillary blood-vessels, and it is never discharged except after it has existed in the blood for some time so much so as

to vitiate its character. Tagge accounts for the blue line around the gums, that the lead enters the blood and then meets with matter around the teeth—the pigment, therefore, is a precipitate from the blood. Andral and Gaverret found a deficiency of corpuscles in the blood, and observed an unnatural yellow color of the serum. Gendrin, Bouillard and Miahle considered lead-poisoning a general disease, a toxicosis—a poisoning of the entire economy. Combalersier limits the toxicosis to the *prima viæ*. Bordice believed the disease inflammatory. Stole and Brachet regarded it as a specific disease *sui generis*, while Gracomini says it is a hyposthenic affection. Boissean accuses the stomach, and Darwin the liver, as the location. There are many advocates that the muscular system is alone affected, and only those muscles the most in use; thus those that are the most abundantly supplied with blood; hence, these localities would have more blood called to them, and more lead deposited in them. That these muscles suffer in their nutrition; that if the lesion were of spinal cord or brain, it would not account for the muscles of the forearm being chiefly affected, nor would it explain the greater amount of weakness on one side than on the other, nor the greater palsy and wasting of extensors, nor the almost total exemption of the nerves of sensation, and so much injury to the motor function. But, on the contrary, if it be muscular, why does it attack the flexors in arthralgia, and the extensors in paralysis? Heubel has shown that the localization of lead-poisoning in the intestines and muscles is not caused by the absorption of the lead directly in the organs. No doubt there is a a similarity in its action to that of ergot; so much so, that I often think that lead should be reckoned as an oxytocic; but this will not help the theorist, for the best authorities now assume that ergot acts only through the nerve-centers. When lead is separated from the blood by the emunctories, or when deposited in the solid tissue, it is harmless. The poison deposited in the tissues and organs of the body, is out of the sphere of noxious power—except so far as it is likely to be re-

absorbed into the circulation, when it will become active and destroy the vitality of the blood.

There are those who contend that lead has its affinities; that it unites chemically with certain tissues and thus destroys their organic life; that there is a constant struggle between life on the one hand, and the chemical action of lead on the other. And they have reduced the action to mathematical proportions—that one grain of lead will neutralize and destroy vitality in one ounce of flesh. With lead constantly applied, a warfare is set up; a chemical contest opens; the deposit re-dissolves; the vital organs soften; and Death, the greater master chemist, closes "the Laboratory of Life."

Now, as Naunyn says, the cause of lead-poisoning should not be sought for in the the muscles; it is not the result of affinity; neither is it, as Hetzeig says, a venous stasis of the extensor side; neither is it ischæmia of the extensors. Taking into consideration all the lead diseases, there seems to be an origin in the nervous system. Liebig, who always saw through chemical glasses, says that poisoning is a chemical action; that lead enters in combination with nerve substance; the nervous matter being altered, it becomes unfit to support life. If the seat is in the nervous system, where is it to be located? Is it a neurosis of the iliac and cœliac plexuses? Does it affect both the sympathetic and spinal systems? The nervous action, internally, is increased: while externally, the phenomena of sensation are sometimes increased and sometimes lost. Astruc and others have localized it in the spinal marrow; Remak, in the anterior horns; Willis refers it all to the brain, and Remauldin to the brain and spinal marrow; Orfila considers it a lesion of the great sympathetic, while Andral regarded it as a lesion of both the cerebro-spinal and ganglionic nervous systems. The question is, is it peripheral or centric. Those who advocate the former, say the lead first attacks the extremities of the nerves by presence, then continues to the centres; and they also speak of degeneration; but Erb states that this occurs in the spinal paralysis of children,

and though he (Erb) acknowledges that the anatomical characters favor the peripheral origin, yet facts show that the spinal origin of lead-paralysis is possible. In conclusion he admits that, after careful examination, it is a primary lesion of the nervous system; that lead-paralysis is spinal, and that all investigations prove it to be a disease of localization.

If we take this view, the diseases are much simplified; they may be distinct but they have a common origin. In lead colic, for instance, we need not worry ourselves with Roche that it is the mucous membrane affected, or with Merat that it is the muscular coat of the intestine, or with Dubois, who places the scene of the drama in the mesentery; or with Tauvri, in the peritoneum; or with Gracomini, in the abdominal muscles; or Legroux, in the hepatic circulation; or with Darwin, that there is a diminished action in the intestine; or with Merat, that there is a paralysis of the intestinal mucous membrane; but we can say that it is a disease of the spine affecting the digestive and urinary organs; that the contracted state of the intestines and the absence of the secretion is due to the same cause. In reference to paralysis—and a curious fact occurs in this connection—lead is the only metal which produces it; Remak's conclusions are the views of to-day; namely, that circumscribed alterations in the anterior gray horns probably lie at the foundation of lead paralysis, and thus the cause of inflammatory affections is frequently assigned to lead—the inflammation of the gray anterior horns of the cord, the spasmodic spinal paralysis, and even myelites. An interesting field for study is given gynecologists as shown by Neftel in the connection between lead-poisoning and vaginismus, and to obstetricians in the production of abortion. M. Paul, an interne in a Paris hospital, has commenced the work and furnished an article replete with information, concise with statistics and startling in its deductions. He shows 123 cases, 64 abortions, 4 premature labors, 5 still-born children, and of those reaching full term, 10 only live beyond three years.

If there be any disease among those known as lead diseases, which chemical action can claim, it is arthralgia, and here Garrod has shown that the use of lead hinders the conversion of uric acid into urea, hence we have the deposition of soda about the joints. Added to this, the digestive functions becoming disturbed, and the organic acids (lactic, volatile fatty acids), generated. These acids absorbed, diminish the alkalinity of the blood, and as a consequence we have nephritis, and as lead is always united with albumen, we have albuminuria. In conclusion, the brain diseases which follow in the train are mere complications not caused by lead. Rosenstein says, saturnine eclampsia occurs from anæmia caused by contraction of the smaller vessels, but Naunyn says if that were the case we would have hypertrophy of the heart as a resultant, and he gives a good solution, stating that the condition of the brain is similar to alcoholic intoxication, not the result of lead, but an abnormal nutrition is developed, followed by a delirium of inanition and not of poisoning; so saturnine eclampsia does not arise from the immediate action of lead upon the nervous element of the brain.

Treatment: Abstain from the use of cosmetics. There is no antidote. The treatment is the same, no matter whether it be the well-known colicky pains, the wrist drop, or paralysis of the extensors of the wrist. In treating, facilitate elimination, hasten tissue metamorphosis—beyond that treat it as a nervous or a spinal disease. It is fashionable at the present day and it is started up as a novelty, to give sulphuric acid lemonades—it is the old treatment of Gendrin revived. The sulphate of lead is not insoluble, the alkaline chlorides, acetate of ammonia, will dissolve it, and their salts are contained in the economy. Tanquerel cites the case where the lead works of Paris stopped the manufacture of carbonate of lead on account of the danger, and substituted the sulphate, and the result was just as unfortunate; indeed it was not long before the foreman who proposed it died from lead colic. Flandin says he has poisoned dogs by rubbing into their skin an ointment of the sulphate of

lead. Iodide of potassium forms the iodide of lead, which passes off by the kidneys, but it acts as a derivative as well as a chemical remedy, and in it we have a great power in modifying the morbid actions of the economy. Use warm baths, the galvanic battery, electricity, local faradization, dry cups, opiates, the bromides, ergot, belladona and nerve tonics. Tanquerel tried strychnia in large doses, with most favorable results.

Case I. On July 20th, 1877, Mary C., aged 30; native of the United States; social condition, married; and by occupation a housewife, was admitted to hospital and assigned to ward 31, bed 166. She was of small stature, refined in appearance; had dark hair and black eyes; her physical condition was such that she had to be assisted to her ward. Dr. Davis, who was in charge of patients on that floor at the time, carefully examined her, and elicited the following history, to-wit:

Patient was healthy until four years ago, when she aborted, since which time she has never been well. Two years since, she was paralyzed from the elbows down. For six months she has been having considerable trouble with her speech, the paralysis seeming to extend to the vocal muscles. She now has great difficulty in pronouncing words; there is a nervous agitation and stuttering. Two weeks ago she had domestic troubles and became very much excited; since then she can walk only with difficulty, and has but very imperfect use of her feet; her hands she is able to use, though they are still very clumsy; she has suffered from constipation and has had attacks of cramps, so much so, that at different times she had been under the treatment of several prominent physicians, and they all told her that it was nervousness from indigestion. The colic had been relieved by poultices and opiates. She brought with her a memorandum which her last physician had given as to the special diet she should use. Dr. Davis diagnosed the case as "spinal paralysis," and put her on the use of strychnia granules. The next day, in consultation, we examined her carefully, and strongly suspected lead poisoning, but she denied all opportunities of contracting it; did not use hair dyes or cosmetics; did not live near or work in any lead-factory, neither did her husband. There was no lead-line apparent on the gums, but she used the toothbrush faithfully. She remained under treatment but a short time and left much improved. Before her leaving, I

warned her if she used lead in any manner, what would be the consequences. November 19, 1878, the same patient was re-admitted. She has been under treatment outside and sent here under the diagnosis of jaundice: she is now suffering from all the symptoms of chronic lead poisoning, is much emaciated, and is a perfect wreck of her former self. The lead line is now well marked on the lower gums; her upper teeth are false; the paralysis of the upper extremities very decided; the characteristic wrist-drop more marked than I ever saw it. There is still paralysis of the vocal muscles; she has metrorrhagia but no vaginismus; is suffering from the twisting pains of colic, and is constipated—so much so that castor oil failed to have any effect. Every remedy was applied that offered any hope of success, but notwithstanding, she gradually grew worse. When told of her critical condition, she confessed that she had for six years been using "Laird's Bloom of Youth." The only intermission had been while she was in hospital before, and for two months after she left. A lady then told her to use white flake, alternating it with what she had previously used; that one bottle of Laird's Bloom of Youth and a quarter of a pound of white flake and two ounces of glycerine, lasted her generally about three weeks. December 5th she was seized with a convulsion, the coma following it lasted five hours. After this she seemed to rally, but on the 8th she was again seized with convulsions, after which she became insensible, and thus she laid in a comatose condition, between frequent convulsions, until the 12th, when she died.

Post-mortem was made by Dr. Engelmann, assisted by Dr. Robert, in presence of Dr. Pharr and myself, 28 hours after death. Rigor mortis already yielding in upper extremities, though still considerable, especially in the fingers and thumbs, which latter were very markedly drawn in; still very distinct in lower extremities. The wrist-drop very characteristic, apparently partly due to a lack of vigor in the extensors of the fore-arm, while that of the flexors is of the same intensity as the other muscles, so that when the fore-arm is turned on its dorsal aspect, the hand is still markedly flexed, not yielding to the force of gravity. The skin of the face presented a marked waxy appearance. There was blueness of the lower gums, and the lower teeth were covered with black sordes. The upper gums were normal; upper teeth were false; section of skin over the extensors of the fore-arm showed a considerable layer of fat for so thin a woman. There was already a decided

paleness of the extensors, carpi ulnaris and radialis longior and brevior, and the extensor communis digitorum and supinator longus, the latter not near as marked as the other muscles. Abdominal section: Still some fat in the abdominal walls; the muscular tissue thin, but of a red color. Great omentum contained a moderate amount of whitish yellow fat, and covered the intestines fully, with no adhesions; ascending and transverse colon enlarged, distended and of a very dark color; decending colon contracted and containing a few hard, dark scybala not thicker than an ordinary lead pencil, and laying lengthwise, almost filling that part of the intestine, ascending and transverse colon, and small intestines almost empty, though distended with gas, and the small intestines appearing normal. The stomach, well developed, rather large and shows on its surface largely distended veins, especially near the smaller curvature. It contained a black fluid; the mucous membrane was pale and smooth. The liver was about normal in size, of a pale, slightly yellow color, more marked in some regards than in others; section shows more distinctly the pale color, and almost an oblieration of the lobules; it has a fatty feel, but cuts harder than fat usually does. The spleen was very small and solid, of healthy color, with considerable connective tissue and blood; there were no adhesions of this organ. The kidneys were very small, their capsules peeling off with remarkable facility, leaving the surface of the organ roughened; cortical substance thin; pyramids anæmic, otherwise normal. Suprarenal capsules apparently normal. Genital organs normal; the fundus of the womb showed distinctly the impression of the intestines. Gall-bladder was of moderate size and filled with thin, black fluid bile. The left lung was free from all adhesions; some little fluid in the pleural cavity, and some hypostatic condition of the posterior part of the lung, were the abnormalities present on that side. The right lung was adherent throughout. There was some œdema and slight clerosis or induration. Heart of normal size; valves normal. The right ventricle contained some dark clots; the left was empty; muscular tissue apparently normal. The leading features of the case were the wrist-drop, paleness of the extensors, the yellowness of, probably fatty, yet hard liver; the small spleen; small, slightly granular kidney; distension and congestion of the ascending and transverse colon, and the contraction and fullness, with sybala, of the descending colon; the wavy appearance of the skin of the face and the bluish discoloration of the lower gums.

Case II. Annie S., aged 25; nativity, Ireland; social condition, single; was admitted to this institution March 28, 1879, suffering from sickness of stomach and cramps in lower part of abdomen, vomiting constantly; she says that about two months ago, while unwell, she had occasion to wash herself, and used cold water, her courses stopped and she suffered as she is now doing, one day being better, and the next perhaps worse than before. She was treated as if the cause was from suppression of the menses. She was relieved by the application of the remedies, but she looked white and as if suffering from lead poison. Upon examining the gums, the leaden line was well marked, and upon inquiry she told me she had used for over a year a mixture of white flake, glycerine and rose water upon her face. She was put upon large doses of iodide of potassium, and left April 20th entirely well.

Case III. Sallie C., aged 25, native of England; social condition, married; occupation, a ballet dancer; was admitted April 18th, 1879. She is suffering from inability to raise the left foot. She has had attacks of constipation, of colic, and pains in the calves of her legs; she is a dancing girl, and attributes her trouble to dancing a challenge jig dance at Kansas City. The blue line on the gums is well marked, and she has been using freely of the face wash, which she thought was Bismuth, furnished by the company in whose employ she was; she also suffers from vaginismus. Under treatment she is rapidly improving, and is able to use the foot again, and will soon be well enough to be discharged as cured.

It is to be regretted that in the post-mortem of the first case, no examination of the spine could be made.

I have, more at length than intended, given three cases as illustrations. They are taken from a number which I have had under my care during the past four years of service in charge of this institution. The use of cosmetics is each year becoming more common, and that, too, among the better class. The victims of this habit—for habit it, is, and victims they are—commence with the use of harmless articles, yet the infatuation becomes so strong, and the superiority of lead to produce the effect they desire, so marked, that they either use carbonate of lead directly, or some advertised preparation which largely contains it.

I am persuaded that physicians are often called upon to treat cases of constipation and colic, when they little dream of the character of the disease or the true cause. The subject of saturnine poisoning is somewhat hacknied, and perhaps there is but little new to communicate; yet I feel that if I succeed in awakening the attention of the profession, and by so doing, patients are guarded "against voluntarily poisoning themselves through ignorance," I shall have done good service.

CASES FROM PRACTICE.

REMOVAL OF A COCKLE-BURR FROM THE VENTRICLE OF THE LARYNX.

By W. C. Glasgow, M. D., St. Louis.

Through the kindness of Prof. Gregory, Dr. Russell, of California, Mo., brought to my office a girl, aged seventeen, stating that she had swallowed a cockle-burr. She was in a state of great prostration, and complained of soreness in the region of the larynx, and complete loss of voice.

Dr. Russell gave the following history: The morning previous, the girl was engaged in cutting cockle-burr bushes with a hoe. Striking one, it rebounded and a burr was thrown off from it and into her mouth, as she stood laughing with her companion. It first struck the soft palate, as was shown by a slight cut in the anterior surface, and from Dr. Russell having found several spines lodged there.

Endeavoring to dislodge it with her finger, she pushed it below, and probably in her fright, having taken a forcible inspiration, it was drawn into the larynx. Having been stopped by the vocal cords, it was forced by the spasmodic contraction of the larynx into the ventricle. She experienced at once a most intense feeling of suffocation, followed by violent paroxysms of

coughing, with complete loss of voice. After a short time the cough ceased and she suffered with dyspnœa, especially on exertion, and pain in the larynx.

A laryngoscopic examination, twenty-four hours later, showed the burr to be lodged in the right ventricle of the larynx, where it was seen by Drs. Todd, Russell and Forrest, who were present. It was lodged in such a manner that the base, with about one-half of the burr, was hidden in the ventricle, while the pointed end projected into the rima-glottidis. The part visible was covered with mucus.

The drawing gives a picture of the burr as seen with the laryngoscope.

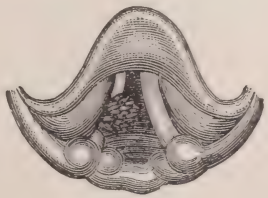

Fig. 1.

Using the German (Shrœtter-Türck) tube forceps, the burr was seized, and having been drawn from the ventricle by traction towards the median line and slightly downwards, it was successfully removed. This peculiar manipulation was necessary to avoid, as far as possible, laceration by the spines of the overlying membrane. The burr proved to be a medium sized cockle-burr, very hard, with stiff spines, such as one would expect to find at this season of the year.

The patient suffered very little during the operation, recovering her voice immediately, and with the exception of slight soreness and huskiness of the voice, which disappeared in a few days, suffered no further inconvenience.

This is the second case of cockle-burr in the larynx that I have seen. During the winter of 1871, a boy, nine years old, was brought to the Sister's Hospital from the country; he was suffering greatly with dyspnœa, and there was complete aphonia. His father stated that several days previous, whilst in the act of removing a burr from his glove with his teeth, one of his companions slapped him on the back; the deep inspiration following, drew the burr into his throat. He immediately experienced a feeling of suffocation, with violent paroxysms of cough-

ing. With the laryngoscope, the burr could be seen projecting from the right ventricle of the larynx, and seemingly almost filling the rima-glottidis. The right false cord was much swollen and covered the greater part of it.

An attempt was made to remove it with the tube-forceps, but it was unsuccessful. The burr was seized, but a prudent amount of force did not dislodge it. The intense dyspnœa and pain, completely unnerving the boy, caused me to abandon the operation. Tracheotomy was then performed by Dr. Gregory, and an attempt was made to remove it from below, but this was equally unsuccessful. A few days afterwards curved throat-forceps were introduced, and the burr forcibly extracted through the mouth. Tracheotomy relieved the dyspnœa and prevented the danger arising from any œdema or inflammation which might be provoked by the laceration of the membrane by the spines of the burr. The burr was very large and hard and the spines very firm.

The tracheotomy wound healed kindly, and the boy returned home after a few days.

HYSTERO-EPILEPSY.

By B. T. Whitmore, M. D., St. Louis.

During the hot weather of June, 1878, I was called to see Josephine T., age 22 years, unmarried. I found the patient unconscious, apparently from the excessive heat then prevailing. On the day upon which I was called, she had been at hard work over a cooking-stove all the morning; in the afternoon she had gone to Lafayette Park, and had done considerable walking. I had recourse to the usual remedies in cases of prostration by heat, and the patient soon recovered.

I heard no more of the case until February 1st, 1879. I was then called, and found her in an alarming condition. She was suffering from a contorted spasm, during which, her body, bent back into an arc of a circle, was supported only by her head and toes. While in this position, she foamed at the mouth and worked violently as though trying to make her head and feet

meet. At times her head would be so far bent back that her face would lie entirely on the pillow. She would remain in this position for ten minutes at a time, using the top of her head and her toes as pivots, swinging up and down in the direction of her head and feet. She often varied this motion by rocking from side to side, in the most violent manner. From this *opisthotinos* position, she would change to a rigid horizontal attitude, her hands tightly clasped over her thumbs. The next phase would be natural. She would open her eyes with a long sigh, after which she would sing loudly and cheerfully for twenty or thirty minutes. During this time she took no notice of anybody or anything, except to laugh heartily if any one spoke to her. From this stage she would pass back to the original contorted spasm, and again run through all the changes. She continued alternately between these three phases for ten hours. After this she began to have conscious intervals, during which, if spoken to smartly and earnestly, she replied intelligently.

I commenced giving her twenty-grain doses of bromide of potassium, three times a day, with half a drachm of tincture of valerianate of ammonia, three times a day, and five grains of hydrate of chloral, per enema, twice a day. Before I got control of the trouble, the bromide of potassium was increased to sixty grains, three times a day, the tincture of valerianate of ammonia to two drachms, three times daily, and the hydrate of chloral to fifteen grains, twice a day, per enema. This treatment was continued for two weeks, with three interruptions, which were always followed by a return of the symptoms. After the lapse of two weeks the patient improved very rapidly, and about the 25th of February she had some quarrel with her family and went to Florissant, Mo.

During her stay there she was worried much at the manner in which she had left home. On March 6th she had a severe attack of the same trouble, and was carried home in a wagon. I was called to see her, and found a repetition of the former spasms, with the addition of delirium and hallucination, during which she would bite her hands and arms, tear her hair, weep and cry out to those near her to remove imaginary cats, snakes, and dogs. These periods were kept up for eight days, notwithstanding the use of sixty-grain doses of bromide potassium, with two drachm doses of tincture of valerianate of am-

monia, and fifteen grains of hydrate of chloral, three times every day, per enema.

The patient is now very well and shows no signs of the severe disorder through which she has so lately passed.

During, and since her recovery, I have frequently spoken to her about her case, and have elicited the following facts: "Before the spasm came on, I felt "*stretchy*," and, as if something was choking me or rising up in my throat. At the same time, I imagined snakes, dogs and cats were fighting near me, and I saw them trying to hurt me. I would call Ma to look; that they were right at me, and then I would lose all sense and feeling." She would bite her hands and arms and pull her hair. During these spells, I often watched her, and would, in her presence, tell her mother not to hold her on the bed or prevent her biting herself. "Let her alone, and if she wants to bite herself, or roll from the bed, let her do so." Whenever I said this, although she was unconscious and did not apparently notice anything, she always quit biting and tearing her hair, and never fell from the bed, although free from all restraint. During all her illness, she had a ravenous appetite, desired *kraut* and other sour things, principally, and though abundantly supplied with food, complained continually that she was being starved to death.

During her attack in February, she should have had her catamenial period, which she missed, both for February and March. When she did have it, on April 16th, she became very weak and sick, trembling and with violent pains in her back. She frequently told me that the pain was always in the top of her head and down the back of ner neck; that the pain would be constant and sharp, like toothache. She never lost anything in weight—which was about 145 lbs.; was fat and fleshy and always healthy and robust. She also stated:

"The second time the spasm came on, I was mad and vexed very much, and went to Florissant. I resolved never to go back home; and all this trouble, and my *fuss* with Ma, kept me worried, etc.

"When this sickness first came on, I was at a boarding-house, and often wanted to go out visiting and could not get off, and would get mad at everybody and myself. Am naturally nervous, all my life. I was never easily scared, but am now.

"I never was perfectly well since last summer; my head was

always dizzy, and my back hurt me, and there was something around my heart. Would have to open the window to get air. In the country I inhaled chloroform and took a great deal of morphine, all to no purpose."

I find no heart-trouble. She seems entirely well in every respect.

I have given this rough sketch only for the purpose of calling attention to what seemed to me to be a very remarkable case, and of eliciting some information in regard to the same. It seems greatly to resemble the case outlined by M. Charcot, in the March number of the ST. LOUIS COURIER OF MEDICINE, and I must believe it one of the same kind, namely, hystero-epilepsy.

INTRAVENOUS INJECTION OF MILK IN CHRONIC BRIGHT'S DISEASE—WITH REMARKS.

BY JOHN BRYSON, M. D., ST. LOUIS.

CASE.—I first saw Mrs. ———, *æt* about thirty-five, in August, 1878. She had already suffered from chronic renal disorder for several months, and was pale, weak, waxy-colored, and cachectic. The entire body, below the breasts, was highly œdematous, but I could make out no accumulation of fluid in the peritoneal sac. The area of precordial dullness was not increased, and, in fact, there was nothing abnormal about the heart. The urine, I afterwards determined, ranged in quantity from eighteen to thirty ounces in twenty-four hours; was pale, of a specific gravity of 1004 to 1011, and contained albumen to the extent of from one-half to two grains to the ounce. It deposited an abundant sediment, made up principally of fragments of epithelial cells, but containing, at the same time, a very few hyaline and pale casts. Several times there appeared, also, some large, waxy casts; but only once a granular cast. There was no evidence of an acute commencement of the renal disorder, but, on the contrary, the history distinctly indicated that it was chronic from the beginning. No uræmic symptoms had appeared. I

believed the case to be one of *chronic parenchymatous* nephritis (large, white kidney).

Arsenic materially lessened the amount of albumen in the urine; but hot-air baths and iron did not improve the general condition. Finally, acupuncture removed the œdema, in a short time, but after its disappearance the patient was not much better, except that she could be moved about and had more ease. Emaciation was extreme, the dry, yellow and branny skin appearing to be drawn over a mere skeleton. Digestion was almost *nil*, and the impoverished condition of the blood (hypalbuminosis) was marked.

On September 27th, at 8 o'clock A. M., the patient appearing to be in a dying condition, about three ounces of milk, fresh from the cow, and of neutral reaction, were injected into the median cephalic vein of the left arm.[1] Immediately, on the milk beginning to flow into the vein, the patient had an uncomfortable, sinking sensation, was slightly nauseated, and soon lost consciousness. The pulse became slower, weaker, and eventually imperceptible at the wrist, but gradually came up, and at the end of the operation was 60 per minute. At 8:40 the pulse was 82, and there were slight chilly sensations. At 10:30, pulse was 118, and reaction was complete. At 2:45 P. M., pulse 108, skin moist, and patient had some appetite; took more than a glassful of milk with relish. At 6 P. M., pulse was 90, and of good volume. Patient passed three ounces of urine, in which there was a trace of albumen.

During the following day (28th), the pulse varied from 80 to 96, and was of good volume. A decided change was to be observed in the skin; it became less dry and dull in color, was more moist or oily, and, in fact, nearly normal. The patient took food, and getting up from her bed, sat in an easy chair for an hour or so. The urine passed was of a better color and specific gravity, (1012), and had in it less than one grain of albumen to the ounce. Its quantity could not be measured.

This improved condition continued during the 29th and 30th, the specific gravity of the urine going up to 1014, and albumen remaining present to a very slight degree. On the first of Octo-

1 Dr. John T. Hodgen opened the vein and introduced the canula—an operation of no little difficulty, as the blood-vessel was very small. I am much indebted to him, and also to Dr. Mudd and Mr. Dewey, for assistance in this case.

ber, I desired to repeat the intravenous injection, but the patient refused her consent, and I injected, *hypodermically*, 12 c.c. (3 *f.* 3) of freshly-drawn cow's milk into the arm. This was rapidly absorbed, and without the slightest irritation. The next day I injected 30 c.c. (10 *f* 3) milk, in the same manner, without difficulty, but the effect on the condition of the patient was not, in in either case, perceptible.

On the night of the second, the patient, who was a chronic opium-eater, but who had abstained from the use of the drug for two weeks previously, succeeded in getting and taking a large dose (some four ounces) of paregoric, to which she added some laudanum,—how much I could not ascertain. At once all absorption ceased, and, gradually sinking, she died on the night of the fifth of October. I was not permitted to make an autopsy.

Remarks.—In attempting to determine the value of intravenous injection of milk in clinical medicine and surgery, we are compelled to proceed by methods entirely empirical. Theoretically, the operation gives large promise, just as the transfusion of blood did. But it is hardly too much to say that the latter operation has not fulfilled its promise; neither does it appear that the former will do all that some have hoped for.

It was my idea, at first, to collect all the reported cases available in the current literature, and to tabulate them with the view of developing the indications for a resort to the operation, and its prospect of success. A most superficial glance, however, over the reported cases coming to my hand, convinced me of the futility of such an attempt. Such tabulation, besides eliminating the detail so essential to an appreciation of the condition of the patient operated on, would be especially guilty of those crudities with which the statistical method is charged, because the number of cases as yet reported is so small. I also hoped by a study of these cases to determine, if posible, the relative value of the operation, as a therapeutic measure, in cases of acute hemorrhage in subjects previously healthy, and in those cases where it had been resorted to for the relief of conditions characterized by blood-wasting, such, *e. g.*, as functional and organic anæmias, the hypalbuminosis of renal diseases, etc. The fifteen cases, however, details of which are at hand, afford no opportunities for any comparison, with such an object in view. This is owing to the variety of the morbid

conditions for the relief of which the operation has been performed.

If the experiments of Dr. Howe (*Vide N. Y. Med. Record*, Dec. 7th, 1878, p. 444) on lower animals (dogs) are conclusive, nothing is to be expected of the operation in extensive hemorrhage; but the result may be very different in the human subject in cases of secondary hemorrhage after operation. Indeed, the cases of Dr. Galliard Thomas, who has four recoveries in seven cases, would show as much.

But even if the injections are useless in cases of extensive hemorrhage, there still remains a large and perhaps increasing class of disorders in which they could be employed with advantage. I refer to that class of cases the chief feature of which is a deterioration of the blood. Dr. Hutchison injected fresh milk into the arm of a laborer, *æt* 44, suffering from extreme anæmia and debility. Three weeks after the operation the patient "seemed on the road to complete recovery." (*Phil. Med. and Surg. Reporter*, March 15th, 1879, p. 230.) It is worthy of note that the transfusion of blood had previously been performed in this case without benefit. Dr. Charles T. Hunter injected 5 ounces of milk into the circulation of a woman, *æt* 32, suffering from "extreme anæmia and spinal irritation." Twenty-seven days later, 6 ounces were injected. "From the time of the second injection, the patient's condition improved wonderfully; she gained flesh and color, and her nervous phenomena disappeared." (*N. Y. Med. Record*, Nov. 16th, 1878, p. 397.)

Besides the case I have recorded above, I know of no other instance of the intravenous injection of milk in chronic kidney disease. In chronic parenchymatous nephritis, the most prominent blood-change is a diminution of the albumen of the plasma; those nervous symptoms that are supposed to indicate the accumulation of the waste products of the body in the circulation being, as a rule, absent, at least during the first stage. Moreover, the prognosis in this form of renal disease is not absolutely bad. My hope was to, partly at least, remedy the blood-defect in my case, and thereby gain time for further treatment. The object in performing the operation was to supply a loss caused by the local disease. I was led, furthermore, to prefer the intravenous injection of milk to the transfusion of blood, in the hope of avoiding the renal congestion that sometimes follows on the latter operation. In this I

was not disappointed. The specific gravity of my patient's urine rose decidedly, but the quantity of albumen lost was not increased. Closely watching its effects, I was led to believe that the patient's life was prolonged by the operation, and this opinion was shared by Dr. Hodgen.

The fate of milk, after being commingled with the circulating blood, is a matter of practical interest. Unfortunately, our knowledge here is very limited. It appears that Donné stated, in 1844, that the milk-globules were converted into white blood-corpuslces. Researches, recently made by N. Wulfsberg, do not substantiate this assertion. He found that the white corpuscles of the blood do really increase in number, but only after they have consumed—eaten—the milk-spheres. From this, it would appear that the milk-globules have to be digested, just as well after they have been injected into the blood, as when they are taken into the stomach. How long the white corpuscles would continue to perform this function is not known. Wulfsberg was unable to prolong the life of animals by the milk-injections. Their body-weight diminished, and they died without obvious disease, and he found hæmorrhagic infarcts in their lungs. Hypodermic injections of fresh milk also failed to maintain life, as the animals operated on became atrophic.

Of the fate of the caseine of the injected milk, nothing, so far as I am aware, is known. In the regular order of gastro-intestinal digestion, the caseine of the milk, as is well known, is first coagulated by a special ferment in the stomach. Either this ferment is absent from the blood, or else the conditions necessary for its activity are not present. Whether the caseine is digested, as appears to be the case with the milk-globules, and if so, by what organs or tissues the proteolytic change is effected, are questions for the solution of which we must look to future research.

Wulfsberg believes that the intravenous injection of milk will not supply the place of blood-transfusion; but neither this nor the fact that the lives of animals cannot be maintained by this means, is not sufficient ground for absolutely discarding the measure as a therapeutic resourse. In selected cases, and to tide over certain states imminently dangerous to life, it may yet prove of great value, and is certainly worthy of further trial at the hands of the profession, and of further research in the laboratories of the experimentalist. From both of these

sources valuable information will, doubtless, shortly come; for intravenous injection of milk is getting to be quite the fashion, especially in eastern cities, and the present activity of physiological and pathological research gives no small hope from *that* direction.

ORIGINAL LECTURES.

CHRONIC INFLAMMATIONS.[1]

By E. H. Gregory, M. D., *Professor of the Principles and Practice of Surgery and Clinical Surgery.*

[A DIDACTIC LECTURE DELIVERED AT THE ST LOUIS MEDICAL COLLEGE.]

The signs of chronic inflammation correspond with those of acute; heat, pain, redness, swelling, being always present. When we say a swelling is *white*, it is a relative term; when we say a swelling is *cold*, it is likewise a relative term. The integumental covering of a chronic inflammatory swelling may be unchanged, but the swelling itself is red, and although the swelling may appear to be cold to common sensibility, yet there is increased heat. There may be no objective pain in chronic inflammation, but there is always more or less tenderness on pressure, and there is more or less objective pain in its history. It will be remembered that in a former lecture we assumed that the inflammatory neoplasm might, under exceptional circumstances, be negative in character, itself not consuming the preexisting textures, but on the other hand, becoming the food of those textures, the latter growing, as it were, by the appropriation of this new material; thus we accounted for inflammatory hypertrophy.

In contrast with this, the general truth, which is almost universal, is, that the neoplasm consumes the preëxisting textures —or the preëxisting textures disappear in the presence of the

1 [This is the second lecture on this subject; for the first lecture see p. 163, current vol. Courier.—Ed.]

new material. The late Prof. Goodsir (Observations in 1845 and 1868) said, "that the disappearance of the textures of an ulcerative surface was due to the rapid formation of a layer of cells, on the surface and at the margin of the ulcer, which caused the destruction of the normal textures, either by previous solution and subsequent absorption of the latter, or by the vigorous growth of the cells monopolizing the proper resources of the part, so that it gradually dissolved and disappeared."

What is here ascribed to the cells, is properly referable to that fundamental quality of the protoplasm—growth—to which your attention has been so frequently directed. This subtle material appropriates everything within its reach, wraps round, absorbs and converts into itself all the nutrient material with which it is in contact.

The study of inflammatory neoplasia is full of interest. On this point there is probably much misconception. We are accustomed to say that pus, which is an inflammatory new material, is an exudation; on the other hand, we speak of the inflammatory new material which we call granulation tissue, as a growth. There is but a quantitative difference between a pus-cell and a granulation-cell; we might say, in order to impress upon your minds the important relationships of these two structures, that a pus-cell is a degenerating granulation-cell, and that a granulation-cell is a developing pus-cell. We are too much accustomed to think of inflammatory new material as exudation or deposits; whereas, they are quite as much to be regarded as growths, as are the non-inflammatory neoplasia.

The non-inflammatory neoplasia, as a rule, exhibit more vigor, all the material weaving itself into something approximating a tissue, whereas, the inflammatory neoplasia exhibit, in their inception, a degree of degradation, unfitting them even for an organization. Pus, and other products allied to pus, furnish us with examples of this peculiar degradation; but after all there seems to be a quantitative, rather than a qualitative difference between the inflammatory and non-inflammatory new formations.

A neoplasm represents at once the vigor and the vagaries of the constitution; it becomes the exponent of the several constitutional modifications impressed by specific agencies. For example, the surgeon recognizes the gummy swelling of syphilis; gout declares itself by its peculiar neoplasm; the glandular swellings of the so-called strumous diathesis, are sufficiently

characteristic. In exceptional cases the neoplasm of chronic inflammation exhibits a disposition, as far removed from the purposes of the part, as that exhibited by the non-inflammatory neoplasm. That typical termination which is looked for in inflammatory conditions, comes after the lapse of years, if it comes at all, and then not until complete destruction of the implicated structures.

Examples have come under our observation, in which proliferation seemed without limit, the growth of granulation tissue seemingly as indefinite as in the so-called sarcoma. As you study the subject of chronic inflammation, you can but be impressed with the fact that the production of granulation is its great event. This tissue grows into the structures in contact, as does the neoplasm of malignant new formations; from time to time, bones are shortened, joints are distorted, and the spine is broken down, and yet the case from the beginning to the end, is uncomplicated by the formation of pus. At a later period, if these cases survive, abscess is not uncommon, probably the rule—and why? Because the constitutional powers yield to the irritation of the trouble, the neoplasm loses its vigor correspondingly, and finally breaks into an inflammatory debris.

The modern operation of resection furnishes us specimens illustrating the destructive agency of vigorous inflammatory neoplasia, but the old operation of amputation came after the inflammatory new formation was disintegrated.

I hold in my hand two bones, both tibia; one is as light as tinder, the other is as heavy as ivory; in the one, the inflammatory neoplasm has grown into the structure in every direction, spoiling the original tissue; at last the time of its vigorous life is past and it, in its turn, becomes a debris. In this specimen with the weight of ivory, the neoplasm survives and is organized into a structure more dense than the original bone; the latter, of course, has disappeared, and its place is now occupied by the permanently-organized neoplasm. This one, the paper-like shell which I hold in my hand, illustrates osteo-porosis; this one, osteo-sclerosis; the one is atrophy of bone, the other hypertrophy of bone; and both probably the result of a chronic inflammatory process.

There is an event of inflammation to which I have not yet called your especial attention; I mean "ulceration." We read of ulcerative inflammation. There is a stage in all inflammations, the

stage of softening, which is an approximation to this process—of course there are examples in which this is a predominant feature. Ulcers, as you have seen them in the clinic, are open sores, generally resting on a base of chronic inflammation. The term ulcer, is limited to open sores indisposed to heal; a fistula is a sinuous ulcer; an abscess, extending its area, is a hollow ulcer; the chronic inflammation of bone, which we call caries, exhibits as its predominant feature, ulceration. An absolute condition of ulceration, is previous degeneration of tissue, The ulcerative process cannot take place in healthy tissue. This degeneration is generally inflammatory in character, yet it may be the result of that peculiar degeneration incident to the non-inflammatory overgrowths. Ulceration and gangrene are nearly allied, but gangrene never complicates chronic inflammation. The essential difference between ulceration and gangrene is the casting off of invisible particles of tissue in ulceration, while in gangrene visible portions are cast off. In the course of time you will become acquainted with a condition denominated interstitial absorption, which is also closely allied to ulceration. In examples of interstitial absorption, there is a sort of atomic dissolution of the textures; whilst in ulceration there is a molecular rejection of the tissue particles; the one, namely interstitial absorption, being a chemical solution of the textures; the other, ulceration, being a physical deposition of the particles.

You have had an opportunity of observing a number of examples of the ordinary ulcers presented in practice. Scarcely a day passes that you do not see the so-called *varicose* ulcer; the sore is generally on the inner side of the leg, and as you observe, is frequently complicated with eczema. These ulcers are sometimes inflamed, at other times rather indolent in aspect. As a rule, there is but one; whenever there is more than one, and on the outside of the leg rather than the inside, it is always a suspicious circumstance, suggestive of syphilis. These ulcers are curable, I mean the varicose ulcers, by position alone. When they are inflamed, we insist upon a recumbent posture, and soothing applications; at a later time the Baynton method, by means of adhesive straps reinforced by a roller bandage, is sufficient to complete the cure. Occasionally we obliterate the veins, strangulating them upon a pin, by means of the twisted suture; the subsequent use of an elastic stocking sufficing to prevent the speedy return of the disease. The syphilitic ulcers of course require the usual specific treatment.

Occasionally you have seen what we call a *fungoid* ulcer; granulation tissue being formed in super-abundance, there being little disposition to heal by the formation of skin; a condition corresponding to the proliferating tissue already referred to in chronic inflammation of the bones. The treatment of these cases consists essentially in the destruction of this *over*-growing and *under*-developing tissue. We assume that each time of renewal after destruction, is attended with improved circulation, until, at last, development is added to growth; that is, the granulation tissue changed in disposition, is differentiated into skin, or permanent cicatricial tissue,

From time to time you have seen a painful ulcer—an irritable ulcer. This may occur in the leg, but you have seen the best examples of this class of ulcers at the verge of the anus. However interesting and mysterious this ulcer may be, it is cured by cutting across its face, embracing in the incision the superficial fibres of the sphincter. Similar incisions through the base of these ulcers is the best treatment, wherever they may be situated. The callous-bordered indolent ulcers are best treated, perhaps, by blistering, and by the position which best favors the circulation in the involved part, always remembering that when an ulcer is situated in a dependent part of the body, the part must be supported by uniform pressure. Ulcers may be specific and constitutional. You have seen the lupoid ulcer, the ulcerating cancerous nodule; nothing short of complete destruction of the hardened basis of these ulcers is of any avail. This you have seen us accomplish by ploughing up the altered structure with the pointed lunar caustic stick. Let me insist on the absolute importance of destroying the bases of these ulcers. Escharotic applications, limited to the surface alone, only aggravate the condition.

There is a chronic phagedena, and it is always a constitutional ulcer, generally syphilitic, serpiginous in character, and usually painful. Opium finds its most advantageous application in these cases, used locally as well as generally. Sometimes we find the actual cautery an important resource. Cleanliness should never be forgotten for a moment. The fountain syringe is especially useful for this purpose; it should be attached to the bed, and the patient should be alive to its constant use.

You have before you specimens of bone illustrating Potts' disease, white swelling, caries and necrosis. See this angular

deformity of the spine; observe, the lamina of the vertebræ are intact, but the bodies of several in the dorsal region have disappeared. Caries has done its work here; its site of election seems to be the cancellated portion of these bones; and caries, after all, is but a chronic inflammation, always constitutional, always a perverted action. How well this part is protected from violence. See these sentinels (pointing to the transverse and spinous processes); think of the strong muscles that filled these deep grooves. Again, the delicate medulla spinalis is between these agents of protection, and bodies which are the site of this disease. Each one of these bodies is cushioned by a dense elastic intervertebral substance, thus providing against possible injury by twists or concussions. I need not speak of the provision for protection in front. This structure, thus hidden and protected, is the seat of this mysterious disorder. If there is a site in the human body most secure from violence, it is this site, and yet your observations in the clinic, on the streets and at your homes, tell too plainly how common is this disease. I need not now refer to the treatment, consisting as it does of the plaster jacket which you have so frequently seen put into execution, in conjunction with the usual constitutional treatment, essentially supporting in character, good diet, iron and oil preparations, and abundance of fresh pure air.

Here is a preparation illustrating hip disease. The head and neck of this femur is gone, the acetabulum is spoiled; this is Potts' disease of the hip. Just here you might ask me, in what component of this articulation did this disease originate? Did it begin in the fibrous capsule, in the synovial membrane, in the cartilages, or in the bones? In practice it is impossible to determine; ultimately, the morbid action involves all the tissues. On this point, my friend Dr. Joseph C. Hutchinson of Brooklyn, writes: "It is to my mind merely a pathological refinement in most cases of joint disease, especially in childhood, to attempt to describe the symptoms indicating distinct pathological states of the individual structures composing a joint. The treatment would be essentially the same, whether one or all of the articular structures are contemporaneously involved." Precisely similar pathological changes are observed in the knee, the ankle, the smaller joints of the foot, the elbow and wrist.

You have become familiar with the treatment of inflamed joints; rest, absolute and complete, is a primary and essential

condition of treatment. Mechanical means which secure immobility, and at the same time enable the patient to take open air exercise, are to be sought; judicious medication and proper hygienic precautions; comprise all the principles of treatment.

SPINAL CURVATURE DEPENDENT UPON PLEURITIS.

Report of Prof. J. T. Hodgen's *Clinic at the St. Louis City Hospital, Feb.* 19, 1879.

A case being presented, the Professor directed attention especially to the position of the shoulders—the one compared with the other—and the two sides of the chest—the one contrasted with the other; from the side noting particularly the outline of the posterior part of the right chest.

Case 1. History of the case from the hospital records: "John Hickey, aged 19, was shot by a policeman, Jan. 25, 1879. The ball struck the tenth rib about four inches to the right of the spinal column, following the rib around to within two inches of the median line, whence it was removed after his admission. The patient did well, having no unfavorable symptom up to January 30th."

The patient questioned by Dr. Hodgen:

Did you fall immediately after you were shot? No, sir; I walked about two-thirds of the block; weakened then, and fell.

When you fell, did you bleed? I bled a little from the back.

Did you cough? I did not.

Have you spit blood? Yes, sir; I have.

When did you spit blood? Down stairs, after I came in the hospital.

How long after you were wounded? I could not tell that, exactly.

[One of the physicians at the hospital stated that it was about four or five days after admission.]

What color was the blood? Dark; real dark.

The color of liver? Yes, sir.

Was it thin or thick? Real thick.

Have you had any shortness of breath? Yes, sir; I did for about three or four days.

The shortness of breath was worse in the beginning, than later? Yes, sir; it is all right now.

Can you take a full breath now? I think I can. [Which he did.]

Remarks: You observe in taking a full breath, the ribs of the patient do not rise as they should do, that is, they are not pushed out naturally—the lower end of the sternum does not project forward—and the sides are not elevated from the spinal column as they should be. There is little of that elevation of sternum usually determined by the action of the muscles attached to the upper end of the thoracic wall. There is none of the lateral expansion that we find in the full inspiration of the healthy individual. You can observe, also, that the right shoulder is very much lower than the left; he says "it falls down" in that section, and he "cannot pull it up." You will observe, also, he is bent to the right side, although this is not very marked. Notwithstanding this inclination to the side, we find increased fullness of the intercostal spaces on the right side, as compared with those of the left. On percussion, we observe the line of dullness is higher on the right side than on the left; this would naturally occur from the position of the liver; but we find it extending higher than the normal line of dulness. The vesicular murmur is distinct on the left, and very indistinct on the right side. I have not learned whether any one has detected evidences of inflammation of the lung; yet there must have been, and also of pleuritis. I will again call your attention to the fact that, in cases of inflammation of the pleura, and of the lung, the result of injury, there is not the same tendency to extension as in idiopathic pleuro-pneumonia. We are apt to have a circumscribed inflammation in these cases; it may, it is true, spread and involve the whole lung, but it is an exception to have this in inflammation resulting from mechanical violence. I have presented this case as an introduction to some others of the same class.

Case II. "Adam Reineker, age 27, admitted Dec. 26th, 1878. Diagnosis, pyo-pneumothorax. The patient says that to the best of his knowledge he has always been a healthy man, with the

exception of an occasional attack of chills; that ten weeks ago he was taken with a chilly sensation; that the Saturday previous he walked ten miles in the rain; got his feet wet and cold. This occurred two days before he had the chill, which came on just previous to his return to bed After getting in bed he was somewhat more comfortable, and until about midnight, when he was taken with a sharp pain about the region of the left nipple: says it seemed to grow worse and worse, and to use his own expression, "it felt like a man with a pitchfork was piercing his lung." Had some shortness of breath, the pain was not weaker at one time than another, and that there were exacerbations; his bowels were very constipated; it hurt him and made him cough more to lie on his right side, so that he lay almost continuously on the left. At different times during the cough he spat up a little blood. On the second day of the attack a doctor told him he had pneumonia, and ordered a blister, which he kept on all day, followed with a poultice; both blister and poultice gave him great relief. Afterwards he took a cough mixture. Subsequently to this he began to cough up large quantities of yellow material, three or four tablespoonfuls at a time. He commenced then to improve right along, till he was suddenly removed from the country to the city in a covered wagon, and brought to a room in which there were five windows; his room was always too cold, and he thinks he took cold and commenced to have pain again, which was so intense that he describes it as excruciating to the last degree.

"Dec. 28. There is bulging of the intercostal spaces in the right middle axillary region of the left side. There is tumefaction, crepitation, and seeming fluctuation and pulsation without *thrill* over the third intercostal space, and a little inside of the nipple and not changing materially with position. Movements of the left chest less than of the right in expiration. Exagerated pulmonary resonance of right side. By auscultation, metallic tinkling with respiration and succussion sound on shaking but no respiratory murmur. Exagerated respiration on right side. Thought of aspirating, but determined to wait for consultation. The next day, December 29th, in consultation with Dr. H., decided to aspirate. Dr. H. attempted to introduce the needle under the ninth rib, which was difficult to feel on account of the considerable œdema of the tissues. The rib was touched and the needle then directed above it. Twenty-two

ounces of creamy, inoffensive pus was removed, when the patient felt great discomfort, and the needle was left in for drainage and as a guide for using the knife on the following day.

"Dec. 30. Slight murmurs in upper part of the lung heard occasionally: applied the aspirator and drew off twenty-four ounces of pus—as much as that appearing to have run off through the canula in the period between the two aspirations. Attempted to enlarge the opening, and as Dr. H. had said, I found the aspirator needle had struck the ninth rib and entered the intercostal space above. The opening was enlarged, following the needle with the bistoury, and the drainage tube gradually introduced and secured by a safety pin. About twenty ounces of pus flowed out. The pleural cavity was washed with chloral, thirty grains to a pint of water. The patient feels easier, which confirms the probability of absence of communication with the bronchial tubes."

Remarks: I wish to say just here that the tumor spoken of was on the anterior left chest, immediately over the region of the heart, and pulsated synchronous with the heart, so that you could see the wave very distinctly. One might have hesitated to introduce an instrument there, lest he should injure the heart. Still it was apparent that this tumor was due to pus outside of the bony wall of chest. Aspiration was performed on the left side, below the eighth rib and on the posterior part of the chest, at a point a little behind a line drawn downward from the axilla. After this aspiration the chest filled up again, and it was determined, by Dr. Dean, to make a free opening. The pus, discharged towards the last, was offensive, and a free opening was made by enlarging the wound made by the needle of the aspirator.

I call your attention to the appearance of the patient—to the drooping of the shoulder upon the affected side, very much more marked than in the case last presented; also to the appearance of the spine, which we see, in looking from behind, is distinctly curved with its convexity toward the right side. In the front of the chest it would appear as though the ribs on the left side ran more directly downward, also that they were nearer together than the ribs on the right side; that the left side of the chest is very much smaller than the right side. Now, if he takes a deep inspiration, we will note the character of the move-

ment. As you see, the entire chest is lifted up, but the ribs do not stand out from the spine. You notice on both sides, the ribs are particularly vertical, but this vertical position is more apparent on the left. You observe the tendency of the spine to curve, with its convexity to the right side, but you will observe a somewhat stooping position, as if he were round-shouldered. Now, this may have been present before this disease began; but, at any rate, it is apparent that now the convexity is greater than it is usually in a man of his age, with a well-marked lateral curve.

Case III. "Otto Worth, age 25; admitted November 21st, 1878. No history of hereditary phthisis; has had a cough every winter since he was five years old; never spat yellow matter until last July; had intermittent fever in June, and the cough with expectoration has continued. Five days before admission had the first hemorrhage—blood dark, mixed with sputa. About the first of December had several hemorrhages, in small quantities—a teaspoonful at a time—making, perhaps, half a pint in twenty-four hours; has had slight hemorrhages since.

"In July, 1875, fell from the roof of a two-story house; was carrying a bundle of shingles, when the round of the ladder broke and he fell, striking on the bare ground; was insensible but soon recovered consciousness; suffered great pain in the lower dorsal region. Sat up in bed the next day, but could not straighten his back, but was not so crooked as at present; legs were very weak, but he could stand up; could not walk because of pain just above the left patella.

"Was in the City Hospital, Sandusky, Ohio, for four months after the accident. About one month after the accident a plaster of Paris jacket was put on, and remained on three months, when removed, the back troubled him only when he stooped or raised himself suddenly; the pain was in the region of the last dorsal vertebra. The back has not troubled him since, except when stooping or suddenly rising.

"The patient did not mention the curvature of his back until his attention was called to it, when the foregoing history was elicited, two months after his admission to this hospital. The patient states (on pumping) that he had a sharp pricking pain in both sides after the fall, and that this has continued to the present time.

"Had no cough soon after injury.

(The patient is sometimes inconsistent in his answers.)

"On physical examination I find the upper posterior portion of left lung is slightly less resonant than that of the right, while the middle posterior right lung is less resonant than the left. Lower part of left lung dull in the erect posture, the dulness disappears when the patient lies on the right side. So also the lower part of the right lung is more resonant when the patient lies on the left side.

"I think there is a slight sub-crepitant râle in upper portion of the right lung and a slight friction murmur in the lower part of the left chest. Respiratory murmur is scarcely audible over any part of either lung, even on deep inspiration. Circumference of chest at axilla, after full expiration, 34 inches; after full inspiration, 34½ inches. Circumference two inches below nipples, after full expiration, 31½ inches, and after deep inspiration, 34 inches.

"In comparing the measurements of the two sides from spine to central line of sternum, the right side, on a line with the nipple, measures 17½ inches, and the left 16½ inches. On deep inspiration, right side, 18 inches, left side 17½ inches."

Patient questioned:

Tell me whether you have ever had an attack of inflammation of the lung, or, at any time, pain in the chest? No, sir; not that I know of.

Have you ever been in the hospital before? No, sir; not since I got hurt.

When did you get hurt? Three years and a half ago.

How did you get hurt? I fell from the top of a ladder.

Did you fall on your back? I don't know; I was insensible.

Were you able to sit up when they took you in the house? No, sir.

Why were you not able to sit up then? I was weak.

Did your back hurt you particularly, at that time? Yes, sir.

Were you weaker in the arms, or the legs, after the fall? In the arms.

How long after you had the fall before you began to walk? About two months.

Why were you kept in bed so long? why did you not walk earlier than two months? I was not confined to the bed; I was in the room.

Did you sit up during that time? Yes, sir.

Did you have any dressing on your back? No, sir.

Did your back hurt you when sat up at that time? Yes, sir.

What part of your back? (Patient indicates the lower dorsal region.)

How long before you had something put on your back? About two months.

What did you have put on your back? A plaster of Paris jacket.

Where were you when it was put on? At Sandusky, Ohio.

Were you hung up by the arms when it was put on? Yes, sir.

Remarks: The record of the case (see above) is very meagre. He does not know how long he was confined to his bed.

This patient was in this hospital from September 29, 1877, to March 8, 1878, before he was admitted here on Nov. 21, 1878. He states that five days ago he had hemorrhage from the lung and a cough, and spat up a considerable quantity of blood, and is now quite weak.

There are some points to which I wish to call your attention. His history would indicate that he had an injury which affected his spine. Note the peculiarities of the form of this spine, and observe that the change is not such as would result from an injury of the spine itself. Here is a marked curvature, involving the entire dorsal region. It is a gradual curvature and is almost directly backward, but not entirely so. In cases due to violence, ordinarily, some particular point in the spine is injured more than the rest; it ends in Pott's disease of the spine, and we have an angular curvature. Now, if the disease in this case has resulted from inflammation which was produced by a blow or violence, it must have involved the bodies of all the dorsal vertebræ, because each is more or less changed in its relation with the others. It is barely possible that the man had an inflammation involving the bodies of all the vertebræ, but it is exceedingly improbable that such a condition should have been produced by violence to the spine. We find causes that will account much more satisfactorily for the present condition than to assume that this deformity is due to violence to the spine. Now, he may have had pleuritis developed by the fall, or a pneumonitis, or both. He gives no history of any pleurisy or pneumonia; no evidence of cough or pain up to the time of his admission to the hospital. About that time he

spat up blood, but it seems the quantity has not been great; that it occurred only on one or two occasions.

I wish to call your attention to the appearance of his chest. There is very little difference in the height of the two shoulders; the left shoulder is, perhaps, a little lower than the right, but it is not markedly so; you will observe too, that the left side of the chest does not seem to stand out quite so far from the spine as the right; looking at it laterally you will observe that the lower part of the abdomen projects unusually for a man; it looks more like the abdomen of a woman; the chest is smaller in the lower portion. The abdomen pushes out as if the lower part of the chest had been very tightly bound for a long time. Now, it is true that the corset which he wore may have influenced this form of the chest to some extent, but it is very improbable that it produced the deformity that we observe here. A corset would necessarily compress the ribs, and would necessarily interfere with the respiratory movements of the ribs—and make the respiration more like that of a female. Now, when this patient takes a full breath, you observe that the breast-bone is not pushed forward, but that it passes up endwise, as if lifted by the muscles connected with the upper portion of the bony thorax, as the ribs are not expanded in their lateral portion, the sternum is not pushed forward at its lower end. Now, when a healthy individual takes a full breath, the sternum not only is elevated, but the anterior extremities of the ribs are carried forward from the spine, increasing the antero-posterior diameter of the chest,—the convexity of the ribs being elevated, a lateral expansion of the chest follows. Here we do not find a great expansion of the chest; during the fullest inspiration the expansion amounts to little more than an inch. I have some measurements here that I will read: Antero-posterior measurement of the left chest is $9\frac{2}{16}$ inches; that of the right chest is $9\frac{7}{16}$; so that the left chest is a little smaller than the right. The anterio-posterior diameter of the right chest during deep inspiration is $9\frac{13}{16}$; during fullest expiration $8\frac{9}{16}$, a difference of an inch and a fourth, as you observe. In the left chest, after deep inspiration, we find the measurement to be $9\frac{1}{16}$; after deepest expiration we have $8\frac{4}{16}$; so that we see that the measurement does not amount to as much as an inch. The transverse measurement, taken opposite the eighth rib, on the most prominent portions on the side, we have after expira-

tion 10 $\frac{1}{16}$ inches; after most perfect inspiration 10 $\frac{6}{16}$ inches; so that the lateral expansion of the chest is only $\frac{5}{16}$ of an inch.

We will now take the antero-posterior diameter of a healthy chest: (an hospital attendant was measured;) after complete expiration, it is 7 $\frac{11}{16}$ inches; after full inspiration, it measures 9 $\frac{7}{16}$ inches. We will try the lateral expansion after complete expiration, 11 $\frac{11}{16}$ inches; after full inspiration, 13 $\frac{6}{16}$ inches. So that we see that the expansion is very much greater in this case than the other; the difference is very maked. Now, is it possible that this curvature of the spine may be dependent upon a disease involving the pleura? We find in the erect posture, the dullness extending on the left side to a level with the nipple; on the right side to within an inch and a half of the nipple. If the patient lies on his back, we find the pulmonary resonance to pass downward on the left side to 2½ inches below the nipple; on the right side, to about 2½ inches below the nipple. On the left side, at a point 2½ inches below the nipple, we find the character of the resonance changing; it is distinctly a gastric resonance below that point. Now, the absence of resonance at this point when the patient is standing, and the presence of great resonance when the patient is recumbent, indicates that the chest contains fluid which changes position just as the patient changes his posture. This curvature of the spine may be dependent on disease of the pleura. Let us inquire into the mechanism of its occurrence. In case of pneumo-pyothorax, which we have seen was present at the time the patient was aspirated, we found the chest very much expanded; the intercostal spaces were pushed out, and the accumulation had been so great as to collapse the lung completely on that side; not only this, but the inflammation had involved the intercostal muscles, and at a certain point the muscles had been perforated and the pus had accumulated under the skin in that region. Now, the first effect of an effusion of an inflammatory character, whether it be serum or something else, would be to distend the chest; and that would be in proportion to the quantity of fluid accumulated in the chest. This would compress the lung as the chest was filled with the liquid; the lung-tissue would collapse; its natural elasticity would draw it down to the root of the lung just as much as it was permitted to do by the filling of the chest by other materials, whether serum or pus. But as the cure begins to be accomplished, as the liquid begins

to be absorbed (and if it be serum it is very apt to be absorbed) we will then have the lung tissue possibly extending, but not sufficiently to fill up the space left by the absorption, and the result will be contraction of the chest, owing to the pressure of the atmosphere, and in diminishing the size of the chest, the pressure would exercise a greater influence on those portions which are most yielding: that is, it would not be so easy to drive in the posterior side of the thoracic wall because the posterior wall is formed of the spinal column and the fixed extremities of the ribs, and covered by strong muscles; the anterior portion being formed, of the yielding portions of the ribs and the sternum, is much more easily compressed. Moreover, the ribs are so hinged to the bodies of the vertebræ, and the tubercles of the ribs are so attached to the transverse processes, that the neck of the rib, together with a portion adjoining it, simply rotates on its own axis, and is not permitted to move upward or downward, inward or outward, while from the curved form of the body of the ribs, and the oblique position in which they are placed, these portions act as the long arms of levers; exert in approaching each other an immense power in producing curvature of the spine.

Now, as we produce contraction of the chest by pressure on the anterior and lateral portions of it (where inflammatory adhesions exist along the inner surface of the ribs—through the altered costal pleura,) we would expect that the ribs would be made to approximate each other, while, at the same time, they would be drawn very far inward, because, as the chest is diminished, the ribs are made more oblique. Now, as the ribs are made to approximate each other, some being connected with the upper and others with the lower dorsal vertebræ, necessarily the spine would be bent upon itself, making its convexity backward. If those on the left side are made to approximate each other more than those on the right side, we would have not only a convexity presenting backward, but also a deviation presenting the convexity to the right. That is the case in this patient. We have more contraction of the chest on the left than on the right side; we have not only a posterior curvature but a lateral curvature. As evidence that we have very great contraction due to external pressure, we find the gastric resonance to pass within two and one-half inches of the nipple of the left side and the gastric and pulmonic resonance, when the patient is

lying on his back, are directly continuous one with the other, showing that the abdominal surface of the diaphragm is much more concave than it should be; and this is caused by the pressure of the atmosphere upon the abdominal walls, forcing the abdominal contents within the walls of the chest. Hence the stomach is dislocated, is drawn or pushed out of its normal position, is made to occupy a very much higher position than is normal; and this seems true, to some extent, of the liver also; the line of dullness on the right side is a little higher than it should be.

Now, I have many times seen cases of pyothorax in which a cure resulted; (very often they do not get well), and where a cure does result I have always found that side of the chest very much contracted, and invariably the vertebral column much bent, with its convexity towards the opposite side. I think I made mention in my last lecture of a little boy, eight years old, who fell from a banister and injured his chest. Within a month he had a very marked curvature of the spine, and the parents were anxious, and had a surgeon see him, who proposed to put an apparatus on him for the purpose of straightening the spine. I know a young lady who had pleurisy which resulted in contraction of the chest wall and a consequent curvature of the spine, which became more marked. An effort was made to straighten the spine by means of an apparatus, a thing which was absolutely useless, since the pressure of the atmosphere would overcome any force of that kind that could be applied. If I am right in my opinion that this patient's deformity is due to the disease within his chest, it is absolutely useless to put an apparatus on him for the purpose of straightening his spine. This curvature will increase day by day; as the fluid disappears the contraction will be greater than it is at present, and the curvature will increase with the contraction. Now the proper method would be to take such measures as would produce an absorption of the fluid and allow the lungs to expand. I know of no special medicinal agent that will accomplish this. Until the lung can expand and fill the cavity of the thorax, the pressure of the atmosphere will hold the chest in as it does now, or even to a greater extent. The history of scar tissue shows it has a tendency to disappearance; and it will tend to disappear in this case as it does in others.

OPERATIVE TREATMENT OF STRICTURE OF THE URETHRA.

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[A CLINICAL LECTURE DELIVERED AT THE ST. LOUIS CITY HOSPITAL,]

Gentlemen :—In the course of these clinics you have seen a great many cases of stricture of the male urethra—cases illustrating almost every form—their effects and complications. There are few diseases that can put forth a stronger claim upon the attentive interest of the physician who loves the science of his profession, covets the gratitude of his patients or the emoluments of success. Disease of no organ or apparatus so quickly excites the attention and alarm of a patient, and incidental disease, as that of the genito-urinary organs; and no affection of these parts more certainly than a difficulty in passing the urine. The history of such cases furnish, alas, many, many instances of mental, moral and financial disaster, whose beginning dates from the first discovery of the physical results of the pathological state constituting stricture. You will see a talented, ambitious and successful business or professional man, may be of gay and joyous humor, metamorphosed into a moody, passive, apprehensive and weak invalid—living for days and weeks in a sort of ideo-motor state, the prey of monsters of his own creation, and of evils conjured up from the unsubstantial regions of expectancy and imagination. The unsound condition continuing, he may not only meditate suicide, as you heard Capt. D. confess he had often done, but execute it as his only fancied relief. Eighteen years ago, in a moment of passion and indiscretion, he exposed himself and contracted a gonorrhœa. A stricture resulted from this inflammation, years passed without relief, and then his troubles began. You will remember that they were dissipation, and consequent impairment of intellectual and business capacity, with the inevitable end of failure and helplessness. And yet he was talented, cultivated and full of opportunity, the pride of his family and friends.

But the effects are not all mental and moral, or ideal. Cystitis,

urethretis and retention of urine, extravasation, suppuration and abscess, fistulous passages, disease of the rectum, and sometimes death from blood-poisoning, or irritation and consecutive disease. Such considerations should be sufficient to enlist you in an earnest study of the subject. Upon former occasions your attention has been especially called to the pathology and diagnosis of this affection, but while you have been witnessing various methods of treatment, I have hitherto only alluded to them briefly and without order. Let us then, this morning, review for a while the operative treatment for stricture. Bear in mind that stricture of the urethra is the result of injury or the organized product of inflammation. The so-called "spasmodic" and "inflammatory" strictures are only symptomatic and evanescent obstructions, requiring no operative interference more serious than the introduction of a catheter. It will be understood, therefore, that when the phrase, stricture, is used, reference is had to the form generally designated in your text-books as "organic" stricture, and any narrowing of the urethral canal by new tissue, a fibrous band, or a scar, is correctly so designated. No exact dimensions or standard for your guidance can be given, for as Sir H. Thompson aptly puts it, men's urethras differ as much in course and dimensions as the shape of their noses. Hence, a sound might be readily passed through a urethra affected with stricture, that could not be passed through another, perfectly sound and normal.

There are several important preliminary questions that must be correctly answered, before a correct plan of treatment can be formed. They are such as these: "What was the cause—an inflammation or injury? In what portion of the canal is it situated? Are there more than one—or is more than one region affected? Is it recent or old, "annular," "indurated," or "tortuous?" What is the calibre or size; and finally, are there complications—for instance, fistula or fistulæ?" It is also well to inquire whether the patient has already had operative treatment.

It will often be your fortune to detect a stricture in a patient who has been long and unsuccessfully treated for a "gleet" or "bastard-gonorrhœa." The attending physician has exhausted his every resource and expedient, and in despair asks your assistance. The persistent, and perhaps severe inflammation which produced the material of a stricture, is now kept up, at least ag-

gravated, by the irritation consequent upon a narrowing, and hence such a history should lead you to suspect what the subsequent examination generally verifies—a stricture. It will probably be of large calibre, but as Mr. Berkley Hill clearly states it, "When there is new tissue, we have really to deal with organic stricture—a wide stricture, certainly, but one that needs only time and neglect to become a narrow and dangerous contraction." And this is precisely the stage, and this the time for successful treatment—when the inflammation and the stricture may be cured, and the long train of evils and disastrous consequences just alluded to, averted.

But such is, by no means, always the history you will hear. The inflammation may have been comparatively mild and of short duration—weeks having elapsed before the patient's attention is attracted to the altered stream. The disease may even have been non-specific. Mr. Bryant has given, in my opinion, the correct explanation of many of these cases, viz.: That the affection is hereditary. I have often traced this disease through several generations. If the result of an injury, a laceration, contusion, etc., the diagnosis is easy and operative interference should be prompt and thorough.

We are greatly indebted to Sir H. Thompson for a clear understanding of the importance of location. It was by his exhaustive and painstaking labors that the relative frequency has been established. In a former lecture, I told you that the urethra was divided into three principal regions, as affected by stricture; following the arrangement of Thompson, they are: 1st. At the sub-pubic curvature, embracing the membranous and about an inch of the spongy portion, which, of course includes the bulb, a length of about one and three quarters of an inch. 2d. The center of the spongy portion, *i. e.*, extending from the anterior limit of the first, to within about two and one-half inches of the meatus; and, 3d. Stricture at the meatus and within two and a half inches of it. A "prostatic stricture," according to the same authority, is a most improable occurrence, a statement which I can fully endorse. The relative frequency is given, as in the first region of 320 cases, 67 per cent.; in the second, 16 per cent., and in the third, 54 per cent., or nearly as many in the region of the bulb as in the entire remainder of the canal. The bearing which these distinctions have upon the selection of an operative treatment will appear to you presently.

It must be apparent even to the inexperienced that it is very essential to know in advance whether you will have to deal with a single, recent and yielding obstruction or with several, hardened, thickened and made resisting and unyielding by age, and, if tortuous, the direction of the canal being changed, it is often difficult to follow it, while your trouble multiplies with every decreasing number in the size of the instrument that can be passed, or of the stream of urine.

If retention has occurred with extravasation, or the urethra has been perforated by abscess or ulceration, and as a result there are one or more urinary fistulæ, such a complication will influence the entire after treatment. The man upon whom we performed external urethrotomy here last Monday was an extreme illustration of this condition.

Occasionally, we must treat a case in which the induration extends longitudinally, involving the entire substance of the corpus spongiosum, thickening it upon all sides and narrowing that entire portion of the canal. In my opinion, there is but one operation that can be successfully practiced in such a condition, and you saw me perform that at St. John's hospital upon Mr. D., a few days ago.

The diagnosis of stricture seems to me so simple and certain that I will now merely repeat to you a part of what you have already heard and seen: The history of the case establishing the presumption of its existence, you make the patient pass his urine in your presence. If a small, divided, twisted or sputtering stream is passed with difficulty or pain, you proceed by exploring the canal with a proper instrument, to determine the number and location of the obstructions. An ordinary bougie of fair size, say No. 8 or 10, English make, may be sufficient. Always begin with a good-sized instrument. When it is arrested, note the location, and then you try the next smallest size and so on until it will pass, and this number will give the calibre of the stricture. In this way you continue to carefully examine the entire canal. But it is sometimes difficult to make accurate distinctions with the ordinary bougie, and to obviate this, Sir Charles Bell invented the *ball probe*, the parent of the present excellent "bougie á boule" of d'Etiolles and the still better "bulbous sound," as improved by Dr. Otis, of New York. In the hands of a skillful and experienced surgeon, the widest stricture can be detected in its very incipiency. The surgeon is

guided in the selection of the number by the size of the meatus if it is neither congenitally nor by disease narrowed. Avoiding the actual obstacles with which you are familiar, it is passed into the bladder, if no stricture exist close enough to arrest it, and then waiting a minute, slowly withdraw it. If contractions exist at any point, they will catch it; there is resistance, and the obstacle is felt as the instrument moves backwards and forth. And thus continuing with gentleness and care, you ascertain the number and calibre of the strictures. In old, bad and complicated forms, the diagnosis may be difficult. And now let me state before entering upon the important feature of our subject, that the main object of this lecture is to attempt something like a correct and clear statement of the rules by which your practice is to be governed. It is with this object that I have made the foregoing brief introductory review.

Remembering the objects to be attained, we must begin with an enumeration of the operative resources at your command; these are to restore, if possible, the natural calibre of the canal; and, this accomplished, to maintain it ever afterwards. Until these objects are accomplished, you cannot consider your patient cured. When a certain quantity of urine accumulates in the bladder, the individual is rendered uneasy by a desire to expel it, and this increases until, if not relieved, the uneasiness becomes positive pain. The expulsion is effected by the agency of the vesical, abdominal and urethral muscles, and when these contract upon the urine, it is driven from the bladder into the urethra—resisting (in accordance with the well-known hydrostatic law) with equal force in every direction. So long as the natural opening of the urethra exists, however, it flows away easily and pleasantly. But if a narrowing at any point opposes an obstacle to the free movement, and in proportion to its degree, the pressure-force is exerted against the expulsive, and this acts upon all the investing structures behind. Either the expulsive efforts or force must lessen or stop, or the tube must yield at some point, and thus the function is disturbed and the parts irritated and damaged in proportion to the degree and persistence of the narrowing of the tube. Remembering that the operation of this physical law is against highly organized living tissues, we begin to appreciate the force of our first proposition. But we are not left to this alone. Clinical experience proves its necessity in the mildest cases. The second, to maintain this uniform

patency, is scarcely less important, and now and then difficult, because we cannot have the intelligent co-operation of the patient. How are these indications to be fulfilled? You can appreciate the fact that since there is such a wide difference in character of the various forms of strictures, influenced by individual peculiarities, that no single method of treatment can be made applicable to all. Innumerable plans have been invented, but we may resolve them all, perhaps, into three classes. The tissue of the stricture may either be gradually or forcibly dilated, or divided by a cutting instrument; or destroyed by the action of a chemical agent. Simple dilatation is a comparatively mild and safe procedure, applicable in the beginning to simple and recent uncomplicated strictures. You commence with the size that will pass without force, and withdraw the instrument after reaching the bladder. This is repeated after intervals of one or two days, using at each operation a higher number, until you reach the largest in the scale. The patient is then taught the use of a soft rubber catheter of this size, and when you have impressed him with the importance of occasionally passing it to maintain the calibre reached —say once every week or two—he may be dismissed as cured. But the tendency is always to contract, and if neglected all his troubles will return. By *continuous dilatation*, is meant the introduction of a catheter of a size that will pass easily just into the bladder, where it is secured by bandages and tapes, and kept in two or three days. It is replaced by one of larger size, for a similar time, and this continued until six or seven days are consumed, when it will be found that the largest size can be passed.

You may adopt this plan when you have experienced serious difficulty in getting into the bladder, in irritable stricture, and when your time is necessarily limited to a few days.

But the most effective apparatus is so constructed as to give the surgeon complete control of the stricture when once through it. He may gradually distend or forcibly and at once rupture its entire substance, dilating it immediately until the largest catheter can be introduced. This is sometimes termed "divulsion," and is the best method of treating most old, obstinate or indurated strictures, when occurring in the membranous or lower part of the spongy urethra. There are two principal forms of instruments—that of Holt, which you see here, and Gouley's or Otis' modification of Thompson's dilator. Each has its mer-

its, and is especially adapted to certain cases. I have now been practicing this operation, forcible dilatation for many years, and notwithstanding the fact, as you are aware, that I have had a pretty extensive hospital and private experience, having done it upon about fifty cases, I have never yet lost a single patient, or, indeed, had serious consequences ensue upon the operation. Others can claim the same success, and yet it is but fair that you should know that serious and even fatal results may ensue in the best hands. One such case occurred but recently in this city. This plan should be preferred to cutting in the neighborhood of the bulb, in all cases in which it is not necessary to resort to external urethrotomy. You should always prefer over-distension or laceration to internal urethotomy in this region. Besides its greater certainty and accuracy, there is infinitely less danger of hemorrhage, extravasation of urine or permanent impairment of the functions of the part.

If the stricture is single and small, use Gouley's instrument; if old, indurated and resisting, but of large enough calibre, Otis', being more powerful, should be preferred, while Holt's is the best, if you have to deal with two or more in the same urethra. Having passed the guide, select a large plunger and with one stroke divulse all of them. The roughness of the procedure is more apparent than real. An obstinate, old stricture, which cannot be dilated beyond a certain point without producing severe general symptoms, may be ruptured in this way, without being followed by any such effects.

Such, gentlemen, are the general rules that govern me in the use of the various "dilators." They cannot be applied with success where there is much longitudinal induration, or in obstinate cases, complicated with fistula, nor within from two and a half to three inches of the meatus. You might possibly succeed, but as a rule, the practice cannot be recommended. As you have observed, we always pass a large catheter after withdrawing the *dilator*, but the patient should then be permitted to rest for two or three days before repeating this operation. From this time it is used upon the "simple" plan.

The stricture may be cut from within in three ways—from without inwards or above downwards, from within outwards,—or as practiced by Dr. Otis with an apparatus he has contrived, and which he terms the "dilating urethotome." It is a dilator carrying a concealed blade. The instrument having been passed,

the blades of the dilator are then separated, making the stricture *tense;* the blade is then projected and the stricture divided. If more than one exists, they are treated in the same way, in succession, until the entire canal is brought to its normal calibre. Dr. Otis claims that strictures so treated are not liable to contract again, or in other words, that a radical and permanent cure is effected. And his statement has the endorsement of some of the best names of the profession. His doctrines, when first put forth, were in many respects novel, but so clear and striking as to merit a fair test. I am sorry that the extent of my experience and the length of time do not justify me in speaking to you authoritatively upon them. But I can say to you that I have for the present adopted them, and with excellent results in the treatment of certain cases. His, is indeed, about the only method by which strictures of large calibre can be accurately detected and successfully treated. I have already intimated that you will occasionally see a case of "gleet" that is kept up by such a stricture, and that the only certain means of cure is by first curing it. Dr. Otis contends that many of these chronic inflammations are originally *caused* by a stricture, and that it is folly to think of relieving your patient of the effects so long as the cause is in existence and operating. But such cases must be rare. I must confess while examining the doctor's work I began to doubt whether the application of his doctrines and methods in full would discover a perfect or healthy urethra left in this wicked world. Should time, however, demonstrate that the cases supposed to be treated and cured once for all are really so, doing away with the old theory of "once a stricture, always a stricture," he will have rendered a great and lasting benefit to the profession and to humanity.

Old and tight strictures near the meatus should be cut with a double-bladed urethrotome from within outwards and the dilatation maintained in the usual way. You can divide a contracted meatus, whether congenital or the result of disease, upon a grooved director with a blunt-pointed blade. It should be done above and below.

And now, gentlemen, we come to speak of external urethrotomy, an operation which you have seen twice performed within two weeks. Some surgeons are in the habit of only resorting to this operation for the so-called "impermeable" stricture, a condition in which it is said no instrument whatever can be

passed into the bladder. This was the condition in only one of these patients. He had longitudinal induration upon every side, involving the bulb and spongy portion for fully three inches. He managed to pass his urine sometimes by drops, sometimes in a small stream, but no instrument could be made to traverse that indurated canal. He had suffered for eighteen years; a long time, you will grant, for one to be the victim of such an affliction. He had frequent chills, followed by fever, his digestive organs were seriously affected, and a rash occasionally appeared upon his skin. As usual, in such cases, the obstruction had finally produced cystitis, and as a consequence, he was tormented by an almost constant desire to pass his urine.

The stricture was cut from without as follows: Being placed precisely as for the operation of lithotomy, a grooved staff was passed down to the obstruction, and steadily held by the chief assistant. I then cut down into the urethra just above the stricture, and extended the incision exactly in the middle line down to the indurated urethra. A long silk thread was then passed through each cut border of the urethra and given to an assistant, and by these he retracted the sides of the wound so that we could see the beginning of the obstruction. After a brief search, with a fine silver probe, a small opening was found and I was able to follow it up for about an inch and a half, then passing a small curved blade along it as a guide, with some difficulty the induration was cut through and the urethral opening extended. Again the guide found the opening and was passed through the constriction, which was divided in the same way, the guide being carried on into the bladder. Upon this we passed a cathetic to make sure, by finding urine, that we had reached the cavity. Then the catheter, a soft rubber No. 10, was substituted for the staff, pushed on into the bladder, secured, and the wound dressed. See to it, in such cases, that the catheter barely reaches the bladder, otherwise it will cause irritation. When he had fully recovered from the effects of the Anæsthetic—not until twenty-four hours afterwards—the catheter was removed, and since has only been passed at intervals of two and three days, the urine mostly passing by the cut. But he does not complain of this. Indeed, he is so happy over his improved feelings, insisting that he is "a new man," that I think he would scarcely be aware of the slight smart it may cause. The wound is doing well at this time, the catheter passes with-

out trouble; he eats and sleeps well, and only suffers from the remaining cystitis, which is better, and we hope will be finally cured. This improvement is the result of the free escape of the urine, his bladder being entirely emptied each time. This had not been the case for years before. There is no other operative procedure proper in such a case, none that will relieve either the stricture or the cystitis.

Inasmuch as the patient A., upon whom we operated in this amphitheatre last Monday, was in a widely different state, I will again call your attention to his case. His trouble dated from a gonorrhœa contracted six years ago. Stricture was discovered about eighteen months later, although it must have existed long before. It was neglected and badly treated. The contraction went on and then years ago he had retention. Says he was relieved with the catheter, but that he subsequently had abscesses in the perinæum, and then soon noticed his urine dribbling through them. When admitted here a week ago, he was in constant distress, remaining over a vessel for hours together, his urine all the time dripping from these fistulous openings—two through the perinæum and one through the scrotum. We exposed the urethra and found that a solid catheter, No. 7, passed pretty easily into the bladder. Passing my finger over it in the middle line, I could clearly feel an extensive mass of induration about four inches from the meatus, near a fistulous opening. We decided to do external urethrotomy, because, first, the stricture was too firm and extensive to rupture, and for the same reason to cut from within; second, because he had chronic cystitis, and finally, because of the existence of fistula. Now, mark, gentlemen, had we attempted to relieve him by any other plan, so long as there was *any* narrowing at the constricted locality, all the urine not finding escape through this part (remember that the size of the stream from the neck of the bladder up to this point was at least double the size of this narrowed part of the tube), would inevitably continue to pass out by the fistulæ, propelled by the expulsive force behind, and so long as this condition exists, it is folly to expect to cure a fistula. Besides, n any case, the wound made in the operation *will always heal as quickly as the fistula.* There could be no reason, then, for attempting any other procedure. The operation was performed as in the case just described, with the addition that we passed a small rasp along the sinuses and removed the spoiled lymph,

pus, diseased granulations, etc., and thus put them in a condition to heal. A large catheter was tied in for a day, and will be passed hereafter as usual. He still suffers much from the cystitis, but feels otherwise improved. Such cases as these —if the operation is performed with care, the surgeon never permitting his guide to leave the natural canal — may always be restored by this plan, unless age, disease of the kidneys or bladder, etc., prevent. It is a loss of precious time to consume it with efforts by any other plan. It is not a sound rule of practice to restrict this operation to so-called "impermeable" strictures. It should be performed in all cases belonging to to either of the foregoing classes. Had we been able to have passed a No. 4 sound for instance, in the first one, I should not have been influenced by that fact to adopt any other procedure. And in instances where you have to deal with recent extravasation of urine, or abscess and diffuse suppuration in the perinæum, never hesitate a moment. The magnitude of the incision will provide an escape for extravasated pus and urine, thus perhaps preventing sloughing, diffuse cellular inflammation, erysipelas, blood-poisoning and death; and during the after treatment this continues to hold good. Not only does the urine have a ready, a free escape, but all other discharges, until the gradual, but sure process of repair by the second intention, is completed. The interval between the cut borders is filled up in this way, the thickening and induration mostly disappear, and hence there is less tendency to after-contraction than exists in all cases after internal urethrotomy. This fact alone is decisive. Nor can the old charge of inaccuracy be urged. There is no other method by which we can proceed with greater certainty and precision.

And, in conclusion, gentlemen, I give it as my opinion, that it is really attended with less danger than any of the other procedures named. I believe it is destined to be generally adopted for all such cases by all surgeons.

REPORTS ON PROGRESS OF MEDICINE.

REPORT ON DERMATOLOGY.

By W. A. Hardaway, M. D., St. Louis.

CLASSIFICATION AND NOMENCLATURE OF SKIN DISEASES.

At the first annual meeting of the American Dermatological Association, a committee on classification and nomenclature was appointed, with instruction to report at the next session of the society, which was accordingly done at the meeting in August, 1878.[1] The scheme of classification adopted was that of Hebra's, with such modifications as were made necessary by the present state of dermatological science. It is as follows:

Class I.—Disorders of the Glands.
1. *Of the Sweat Glands.*
2. *Of the Sebaceous Glands.*

Class II.—Inflammations.

Class III.—Hemorrhages.

Class IV.—Hypertrophies.
1. *Of Pigment.*
2. *Of Epidermal and Papillary Layers.*
3. *Of Connective Tissue.*

Class V.—Atrophies.
1. *Of Pigment.*
2. *Of Hair.*
3. *Of Nail.*
4. *Of Cutis.*

Class VI.—New Growths.
1. *Of Connective Tissue.*
2. *Of Vessels.*
3. *Of Granulation Tissue.*

Class VII.—Ulcers.

Class VIII.—Neuroses.

Class IX.—Parasitic Affections.
1. *Vegetable.*
2 *Animal.*

1 Transactions American Dermatological Association, New York, 1879.

Space does not permit us to give the names of the various individual affections as they occur under their respective classes and sub-divisions. The adoption of a uniform classification and nomenclature by this representative body of dermatologists was a measure of the greatest practical importance, and will do much to simplify the study, and increase the general interest in the department of cutaneous medicine.

DISORDERS OF THE GLANDS.

Proper Use of the Term Acne.—G. H. Fox[1] would restrict the use of this term to an inflammatory condition of the sebaceous glands. He would likewise discard the expressions acne oleosa, acne punctata, acne miliaria, and would use instead the terms seborrhœa oleosa, comedo, milium and acne. F. also argued that the word acne should be dissevered from its connection with rosacea, as the latter is not an acne at all, but an entirely different condition.

Taylor[2] in an exhaustive lecture on the treatment of acne, counsels a judicious combination of both local and internal medication in this affection. For the latter purpose he advises alkalies, diuretics, mercury, cod-liver oil, etc.; he has failed to obtain any good effect from glycerine, as recommended by Gubler, of Paris. The local treatment is mainly stimulant, although soothing applications are advised under the appropriate conditions. [We regard this paper as one of the most valuable that has appeared on the therapeutics of this annoying and troublesome malady.—Rep.]

Purdon[3] describes a form of acne which occurs in persons working in flax-spinning mills, the disease being occasioned by the oil used in the machinery, as also by the oil contained in the flax.

Minute Anatomy of Molluscum contagiosum. Tilbury and T. C. Fox presented a paper to the Pathological Society of London on this subject. They contended for the glandular origin of m. contagiosum, in contradistinction to certain views held by Lukomksy and others. These latter affirmed that the little tumors were produced by the growing downwards of the reto malpighii, in cone-like processes into the corium, and that the

1. Transactions Am. Derm. Asso., Appleton, N. Y., 1879.
2. Am. Clinical Lectures, Vol. III, Nox.
3. Archives Dermatology, Jan. 1879.

cells underwent degenerative changes, and gave rise to the so-called "mollusc bodies." The papillæ, altered by pressure, were represented by the fibrous septa of the gland-like tumors. The Doctors F. failed to detect any evidence of the growth downwards of the rete; on the contrary, it was flattened out and thinned, by and over the growing molluscum tumor, and was quite normal in the adjacent parts, and took no part in the formation of the tumor. The first sign of the disease was hypertrophic growth of the sebaceous glands, in which the lobules became multiplied, and the cell-contents actively increased. They called attention to the changes that went on in the cell-contents of the tumors.

There were two principal phenomena; first, the rapid endogenous formation of *schleim*-cells, preceded by great activity of the nuclei, and seen in the outermost cells; secondly, the free vacuolation of all these cells as they advance toward the acini and to the excretory duct. The mollusc bodies were but these completely vacuolated cells, the contents of which had undergone some peculiar departure from the normal sebum. They were simply completely vacuolated glandular cells distended by altered sebum. The two processes of cell multiplication and vacuolation went on in the same cells, the former in the earlier, the latter in the later life of the cells. In the expressed contents of the molluscum tumor, there were observed cuticular cells like those observed in comedo, and the mollusc bodies—that is, altered gland cells. The latter were seen now and then to be more or less embedded in the cuticular cells, which often exhibited moulds also, from which the mollusc bodies evidently dropped out. Lukomsky argued that this condition signified the formation of the "mollusc bodies" in the rete cells. The authors believed that the mollusc bodies were not formed in these cuticular cells, but became partially impacted in them in their passage from the acini by the great pressure in the concreted mass. Evidence negative as to fungus elements in these tumors. *Med. Times and Gaz.*, Oct. 26, 1878.

INFLAMMATIONS.

Local Treatment of Eczema.—PIFFARD recommends in chronic erythematous eczema the ordinary astringents to reduce the congestion, as also a solution of bromide of potassium in glycerine, fld. ext. ergot in cold cream, and a similar preparation of arnica root. For the pruritus he greatly relies upon the hydrate

of chloral and camphor mixture of Bulkley, in the proportion of ten to twenty grains to the ounce of ointment. He advises against the use of water in the exudation stage, and calls attention to the virtues of tincture of Hamamelis for the itching; this latter drug is of particular value in eczema complicated with varicose veins. In chronic eczema, P. has obtained good results from the hypodermic injection of arseniate of sodium into the affected regions. (*N. Y. Med. Record, Oct.* 26, 1878.)

Jaborandi in Acute Eczema.—Ord, from his experience with this drug in a case of acute eczema, is inclined to regard it as a remedy of value in similar conditions. It probably acts by producing an acute hyperæmia of the skin, thereby causing the rapid removal of effete material, and to an improved nutrition of the parts. (*Med. Times and Gazette, Jan.* 11, 1879.)

Martin's Bandage in Eczema. Martin claims to have definitely called the attention of the profession to the value of his bandage in eczema of the legs, and that as recommended by and made for him, they serve the purpose of the modifications proposed by others, particularly as regards length, width and thickness. [We have not found the rubber bandage of such extensive efficiency as is insisted upon by Martin and Bulkley; on the contrary, in carefully selected cases, we have seen it productive of more harm than good; in other cases, however, and of the same kind, the result has been brilliant.—Rep.] (*Toledo Med. and Surg. Jl., Jan ,* 1879.)

Oleate of Zinc in Eczema.—Crocker advocates the use of this preparation in the discharging stage especially. It is prepared by stirring together one part by weight of oxide of zinc with eight fluid ounces of oleic acid, and after standing two hours, heating it until the zinc is thoroughly dissolved. When cool, it forms a yellowish-white, hard mass. This can be made into a soft ointment by adding one part of olive oil, lard or vaseline—preferably the latter. It may be spread on cloth or thin paper for application to the skin. (*Brttish Med. Jl. and Am. Jl. Med. Sc., Jan.,* 1879.

Ung. Vaselini Plumbicum.—Kaposi suggests the substitution of vaseline for olive oil in Hebra's famous diachylon ointment. It is prepared by heating together equal parts of lead-plaster and vaseline, and perfuming with lavender. [Ozokerine or earth-wax[1] might be used in some cases in place of vaseline, as

1 *Med. Times and Gazette*, Oct. 12, 1878.

it is said to be cheaper, more consistent, and perhaps gently stimulating, otherwise being almost identical with vaseline.—Rep.] (*Wiener Mediz. Wochenschrift, No.* 17, 1878—*Boston Med. and Surg. Jl., Dec.* 12, 1878.

Linseed and Oil in Skin Diseases.—Sherwell, in a paper read before the Dermatological Association, urges the use of linseed and its oil in eczema, pityriasis rulsa, etc. It is recommended both for external application and internal administration. The Bombay or Calcutta seeds are advised for internal use, these containing about 30 per cent. of oil. A favorite method of administration for the male with sound teeth, is to carry about ten ounces in the pocket, of which a teacup could be consumed in a day. For women and children it is best taken in a porridge with milk. A very palatable bread can likewise be made from it by admixture with flour. (*Archives of Dermatology. Oct.*, 1878.)

Chrysophanic and Pyrogallic Acids in Psoriasis.—Garland, in a letter from Vienna to the *Boston Journal*, makes some interesting statements in regard to the use of these drugs in psoriasis. The experience of dermatologists in that city has established the following rules for the application of chrysophanic acid in psoriasis: (1). Isolated patches respond most favorably to treatment by the acid. (2). Psoriasis of the face and genitals should not be treated with it, and also, perhaps, psoriasis punctata when acute. (3). It should be applied under the personal supervision of the physician, only, as unpleasant symptoms may arise from careless or injudicious use. Pyrogallic acid, which is chemically allied to chrysophanic, has been found by Dr. Jarisch, Hebra's assistant, to act very similarly, and to possess some advantages over the latter. Its superiority consists in the fact that it does not dye the hair, nor cause any inflammation in the skin around the psoriatic patches, and therefore may be used upon the face without fear of œdema and conjunctivitis, and consequently may be entrusted to the patient with confidence. It is somewhat slower in its action than chrysophanic acid, though vastly more efficacious than older methods. Dr. Jarisch makes use of an ointment containing ten parts pyrogallic acid to ninety of unguentum emolliens. (*Boston Med. and Surg. Jl., Jan.* 30, 1879.)

Medicinal Rashes.—Seguin[1] publishes the notes of a case—a

1 *Archives of Med.*; Feb., 1879.

lady aged 50—in whom a moderate dose of opium produced an acute localized dermatitis, resembling erysipelas; this was again developed upon the subsequent administration of more opium. Thin,[1] in a communication to the Royal Medical and Chirurgical Society describes the microscopical appearances of the skin in iodide of potassium eruption. The eruption occurred in the form of bullæ and pustules on the face and dorsum of the right hand. The skin examined, was from the dorsum. The cutis under the bullæ presented three distinct areas of morbid change. The innermost layer was composed of a structureless, almost homogeneous, but faintly granular substance, containing rows of leucocytes at points; the middle area was composed of a layer of exudation cells, suspended in a very delicate reticulum; the outer area was formed by remnants of connective tissue bundles, separated by wide spaces. A few blood-vessels were in the second area, a large number in the third. The vessels were distended by red corpuscles, and their walls were in many instances, partially disorganized. Coagulated albuminous material from the blood, formed the substance in the inner area. The third area was bounded almost abruptly by the bundles of connective tissue of the cutis. The sebaceous glands were unaffected. Portions of blood-vessels in the deeper strata of the cutis, and distant from the bulla and sebaceous glands, were distended and plugged with disorganized blood. The epidermis over the inner area, was ruptured and disorganized. The bulla was formed by injury to the walls of the vessels of a limited area, and by escape of blood fluid, which displaced the connective tissue, pierced the rete, and accumulated under the horny layer. Thin thinks, that the tendency of iodine, when present in the blood currant, to attack special points of the vessels, explains the varieties of iodic eruption. He suggested as an explanation of iodic purpura, that a portion of the wall of a vessel is so suddenly and thoroughly destroyed, that the local changes are limited to effusion of a small quantity of pure blood, and to plugging of the vessel.

Duhring,[2] in a lecture at the Hospital of the Univ. of Penna., exhibited a patient with a maculo-papular eruption, due to potassium bromide, which he said was an unusual variety of lesion after the use of that drug, the eruption generally being of a pustular character.

1 *Med. Times and Gazette.*, Nov. 23, 1878.

2 *Phila. Med. and Surg. Reporter*, *Nov.* 30, '78.

Mr. Julius Cæsar,[1] in a note to the "*Lancet*," mentions the case of a patient to whom he first applied a belladonna plaster, which was followed by a copious herpetic eruption; after this, he gave small doses of the tincture of belladonna internally, which caused a copious erythematous rash on the upper portion of the body and in the throat. He calls attention to the two different lesions produced, the one by the local application, the other by the internal administration of the same drug.

The *Medical Times and Gazette*, in an editorial article, directs attention to the now well-known occasional influence of quinia, in giving rise to the so-called "quinine rash," and quotes largely from Köbner's paper on the subject. The "*Times*" considers that many anomalous eruptions, *e. g.*, *pityriasis rubra* erysipelas, relapsings carlatina, etc., find their explanation in this peculiar action of quinine on the skin. Dr. Kemper,[3] from an extended experience with the sulphate of cinchonidia is disposed to regard it as not infrequently producing urticaria in persons taking it.[4]

Psoriasis due to Rheumatic Diathesis.—Ferrier cites the case of a man laboring under the rheumatic diathesis, who had general psoriasis; the rheumatism affected the joints upon which the psoriasis was situated, and followed precisely the course of the cutaneous disease. *Le Prog. Med., Oct. 5,'78.–Arch. Derm., Jan.'79.*

Case of Recurrent Cutaneous Hemorrhage with Urticarial and Bullous Efflorescence. J. C. White records a very unusual case of this character, occuring in an otherwise healthy woman, aged 39. The affection had commenced four years before she came under his charge, and since had recurred regularly three or four times a year, each attack lasting about 7 weeks. The first appearance of surfaces newly invaded, were circular erythematous blotches, or well-defined wheals, these varying in size from a pea to a half-dollar; these lesions remained unchanged for 24 hours. After this time, some of both kinds of eruption would become bullous, some of the wheals would subside into erythematous patches, and the latter would sometimes assume the form of pomphi. In forty-eight hours the multiform lesions would all become more or less hemorrhagic, and of a tint vary-

1 *London Lancet*, March 22,'79.
2 Nov. 23, '78.
3 *Cin. Lancet and Clinic*, Oct. 19th, '78.
4 See also *Lancet*, Nov. 16th, '78.

ing from a bright scarlet to purple black, while large surfaces of intermediate and surrounding skin appeared as if stained by severe contusions. Subsequent changes in the various lesions were slow. Some of the bullæ would increase in size, containing finally as much as a half-glass-full of bloody serum; others would rupture from the scratching, and become oozing surfaces; on these and on other varieties of excoriation, serohemorrhagic crusts would form. The effloresence on palms and soles were bullous, and attained great size. The affection extended down to the chest, on the arms nearly to the shoulders, and from the feet half-way up to the thighs. The rest of the integument was healthy; mucous membranes not involved. The subjective symptoms were pruritus and burning in the elementary stage, and later soreness of the excoriated patches. The writer remarks that the occurrence of mixed erythematous, urticarial, and bullous effloresence is not unknown, but a recurrent hæmorrage taking place not only into the pre-existing lesions, but also into otherwise healthy cutaneous tissue, is altogether a new element in such cases. Treatment was ineffectual in modifying the usual course of the attack.—*Boston Med. and Surg. Jl., Oct. 10th.,* '78.

Exfoliative Dermatitis in Children at the Breast.—The mortality of the disease is about 50 per cent. It makes its appearance from the second to the fifth week of life in the following order: Dryness and slight desquamation, redness of the lower part of the face, with fissures at the angles of the mouth, the mucous membrane of the latter becoming hyperæmic, and the seat of large, irregular erosions covered with a thin grayish layer. Meanwhile the child remains well nourished, and shows no elevation of temperature. Later the redness extends over the whole body, and crusts form on the lower part of the face, under which the skin becomes deeply fissured. The epidermis over the whole body is thickened, and lifted up from the cutis by a thin layer of fluid exudation. The epidermis is soon thrown off in large masses, leaving the exposed cutis of a dark-red color, presenting an appearance like that of an extensive burn. Sometimes a thin, yellowish crust, forms on the exposed cutis, which becomes dry and firmly adherent, especially at its edges. The hands and feet are particularly affected, and the epidermis peels off in great flakes. Several varieties of the affection in its early stages were observed, sometimes thickly-scattered

miliary vesicles being seen, principally seated on the forehead, extending to the scalp. In other cases, the eruption resembled an eczema. In a third class of cases, the epidermis was elevated in the form of vesicles and bullæ, resembling closely those of pemphigus. Desiccation occurred rapidly, so that the appearance of normal skin was again presented in twenty-four to thirty-six hours. In exceptional cases, the skin presented a remarkable dryness throughout the whole course of the disease. In these no large masses of epidermis were thrown off, but the skin became fissured and presented a parchment-like dryness. The portions of the skin affected, were limited in extent, and exhibited here and there thin and firmly adherent crusts. Regeneration of the epidermis took place more slowly than in the other class of cases. This type of the disease occurred in children, whose nutrition had suffered from other causes. All of these changes usually took place within a week. Later a slight desquamation occurred, often accompanied by eczema, furunculosis, and formation of abcesses in the cellular tissue, sometimes resulting in extensive phlegmonous infiltration, gangrene, and death, from intercurrent pneumonia, colliquative diarrhœa, etc. The author regards the disease as of a pyæmic nature. It is not contagious. *Centralzeit f. Kinderheilk, Oct.* '78.
W. T. Alexander, *in Archives of Dermatology, Jan.* 18,79.

Urticaria Pigmentosa.[1] Morrow records at length an interesting case of this anomalous affection, and gives a synopsis of other cases under the care of Baker, Fox, Barlow, Sangster and Nettleship. The principal features in Morrow's case were as follows: The patient was a healthy, well-nourished child, nearly two years old, the present eruption dating from its sixth month. The body was covered with an eruption which was distinctly elevated, and papular or tubercular in character, the spots varying in size from a pea to a ten-cent piece. They occupied the face and entire body, but most profuse on the back and over the flexures of the joints, a few on palms and soles. The color was a pale yellow, but became scarlet when the child was excited. The elevations were quite preceptible to the touch. When violently rubbed or scratched the elevations became more marked and the skin looked nettle-stung. In the eight or ten months following the first observation detailed above, the eruption underwent appreciable changes. The

1 This affection is placed here provisionally.

number of pigmented spots obviously increased, and there appeared, successively, small crops of tubercles, which were irregularly distributed. These masses seemed to be an aggregation of small nodules They projected several lines above the surface, and varied in size from a coffee grain to an almond. They were bright red at first, but finally became of a brownish hue; they were solid, though sometimes having a deceptive appearance of fluid contents. These spots would develop suddenly, after an urticarial attack, remain stationary for a while, and then undergo a rapid process of involution. Their average duration was from one to three weeks. The eruption when seen a year later presented a marked change. Only two or three of the tuberculated spots were to be seen, but the pigmented spots covered almost the whole body, the mucous membranes of fauces and palate not being exempt, although lacking the characteristic yellowish hue seen on the surface. Most of the pigmented spots are elevated. The skin was hyperæsthetic and pruriginous. Urticarial attacks occur at variable intervals, in warm weather, as often as once a week, but not so frequently in winter. Improprieties in diet, fright, anger, or direct irritation of the skin would bring out the urticarial wheals. Medication has proved useles.s The general health is not affected.

All the cases reported so far have occured in very young children, developing in the first year of life. (*Archives of Dermatology, Jan.*, 1879.)

HYPERTROPHIES.

Ligature of Femoral for Elephantiasis Arabum. PINNOCK essayed Carnochan's operation for this malady; but while the operation itself was successful, the result, as regards the diminution of the size of the leg, was unsatisfactory. He advises the use of ergot and digitalis for this condition.[1] (*Lancet, Jan.* 11, 1879.)

Scleroderma. MADAR[2] (*Vierteljahr f. Derm. u. Syph.*, 1878) reports a case of scleroderma universalis, occurring in a young woman of 17. After certain premonitory symptoms, the joints became swollen; rigidity of the cheeks, accompanied with pain and pigmentation of the skin, and tension and immobility of the joints, set in in two months. Eight months after, the face had become as rigid as marble, the eyeballs, lids and lips alone being

1 The reporter would expect a good result from the use of a Martin's bandage in this disease.

2 *Edin. Med. J'l.—Monthly Abst., Jan.* 1879.

movable. The throat and abdomen were normal, but the skin over the trunk and extremities was dense and hard. Fingers distorted and fixed, joints painful; general subjective sensations of tension. No organic lesions. Pain was mitigated by faradization. Pericarditis, followed by diarrhœa and exhaustion, terminated her life.

Autopsy revealed pleuritic and pericardial adhesions, fatty degeneration of myocardium, and wasting of organs and anæmia. No pathological changes in the spinal cord or ganglia. The skin contained an excessive amount of pigment, both in the deep part of the rete, and in the papillary portion of the derma. The reticular part of the cutis seemed thicker than normal, though its meshes were compressed; there was hypertrophy of the subcutaneous areolar tissue, with disappearance of fat. The other component parts of the skin were healthy. M. regards scleroderma rather as a result of chronic inflammation of the skin than as due to lymphstasis (Kaposi) and that it is essentially a trophoneurosis; comparing the atrophy of the skin to progressive muscular atrophy.

Crocker[1] showed a case of this trouble before the Clinical Society of London, which made its appearance in a girl of 13. According to C., the noticeable features in his case were the rapid onset, the process being complete in less than a fortnight; the almost universal diffusion of the induration; the association with acute rheumatism and cardiac disease, the repeated attacks of pericarditis; high temperature and œdema.

Under the title of "a case of Scleroderma," Foster[2] furnishes the notes of the following case, which he thought noteworthy, as it had been pronounced as cancer by several surgeons, and as death occurred without the intercurrence of any other disease: Patient was an unmarried woman of 36, in whose family there was no history of cancer. The affection commenced as a slight abrasion of left nipple, followed by a small, hard mass imbedded in the mammary gland. Later, the whole breast became firmer and less movable than normal, and the cellular tissue adjacent became infiltrated, which points, at first doughy, became more firm with tendency to involve the overlying skin. When first seen, the disease affected the whole of the skin of both breasts, that over

1 *Med. Times and Gaz.*, Dec. 28, 1878.

2 Transactions Am. Derm. Asso. D. Appleton & Co., New York, 1879.

the sternum and the whole left half of the chest in front, besides creeping around to the scapula behind, as well as the greater portion of the left arm and forearm. The proper substance of left breast was much shrunken, and the nipple was surrounded with a groove of ulceration. The most decidedly indurated parts of the skin were of a board-like hardness and thin, while the other indurated portions were somewhat swollen. The former were sharply defined; the latter, less definite in outline. General health good, and her functions regularly performed. Iron was given internally, and a mild galvanic current applied to affected parts. After a month she complained of a sense of constriction, and the affected parts became more sensitive to galvanism. Some weeks afterwards, an increase in the induration about the axillæ was noted, and also the sense of constriction, combined with which was now a decided shortness of breath. From that time the disease gradually progressed both in extent and degree, the induration spreading over almost the entire trunk, as well as both arms. All the left breast became covered with highly-vascular granular tissue, and the patient suffered from almost constant pain in it, of a burning character. Later, she suffered terribly from dyspnœa and an excruciating pain in the umbilical region. For her extreme suffering she took no less than thirty-six grains of morphia, hypodermically, in the twenty-four hours. Respiration seemed possible only under the influence of the narcotic. Before death, the induration of the skin extended in all directions, covering the abdomen, back, and, partially, thighs, and extending upward to the hair behind and the jaws in front; also seemed to become browner and firmer, until it resembled sole-leather. No autopsy.

(We agree with Dr. Heitzmann in his remarks on this case, that it bore somewhat of resemblance to lenticular cancer, as described by Kaposi in Hebra's work, although it must be confessed that the condition as a whole was most anomalous.—Rep.)

Extraordinary Pigmentation of the Skin in Pregnancy.—Dr. J. W. McLane reported to the N. Y., Obstetrical Society, the case of a woman in the eighth month of gestation, in whom there was a deposit of pigment over the whole body. The pigmented spots varied in size from one inch to six inches square or more. The largest patches were upon the neck, back and thighs, and were the color of a negro's skin. [*Am. Jl. Obstetrics, Oct.* 1878.

Peculiar Affection of Palms and Soles.—DAVIES COLLEY related the case, and exhibited specimens to the London Pathological Society, of a Brahmin Hindoo, aged 45, who had died of pyæmia after a surgical operation. The palms of the hands and the soles of the feet, in addition to small spots of leucoderma, were covered with an eruption of small tubercles, composed of thickening of the horny epiderm, beneath which the papillæ were much obliterated; they resembled small corns, but were seated indifferently on parts not exposed to pressure, as well as those which would have been pressed on. [*Lancet, March* 15, 1879.

Brown Pigmentation of Skin in Lymphadenosis.—G. E. PAGET gives the notes of a case of this character, in which there were extensive brown discolorations over the body, except about the mouth. On *post mortem*, the suprarenal bodies were found normal, but the semi-lunar ganglia and solar plexus were involved in a closely-aggregated mass of enlarged lymphatic glands. [*Lancet, Feb.* 22, 1879.

NEW GROWTHS.

Leprosy in America.—The committee on statistics of the American Dermatological Association[1] has made a report upon the existence of Elephantiasis Græcorum in this country. PRESIDENT WHITE, in referring to the report, said, that the prevalence of this disease here, especially among the French in New Brunswick, the Norwegians in Minnesota, the Jews and blacks of the South, the further fact of the occurrence of authentic sporadic cases in some of our northern States, the penetration of a race greatly prone to the malady among our people, and the possible transmissibility of the affection in other ways than by heredity, rendered a study of leprosy of vital importance at the present time. [*Transactions Am. Dermatological Asso., 2nd Annual Meeting, Appleton, N. Y.*, 1879.

A Case of Anæsthetic Leprosy.—HYDE has given a valuable and interesting clinical lecture upon a case of Leprosy (anæsthetic), which was presented at his clinic in the Rush Medical College in Chicago. The lecturer said that, all told, there were not more than one hundred lepers in the United States, distributed in South Carolina, Louisiana, Maryland, New York, California,

1. Transactions, New York, 1879.

Minnesota and Illinois. So far as known, the subject of the lecture was the fifth case reported in Chicago. He does not regard the contagiousness of leprosy as satisfactorily proven, and while admitting the probability of transmissibility by heredity, says that it does not necessarily follow that the children of leprous parents will fall victims to the malady. [*Am. Practitioner, Feb.*, 1879.

Pigmentary Syphiloderm.—ATKINSON, following Hardy and Fournier, claims that the abnormal pigmentation sometimes found in syphilitic subjects, especially in females, and situated on the neck, is a direct manifestation of syphilis. He reports several cases in support of his views. As this lesion is a very rare one, it is very difficult to determine its exact nature; and, as Dr. White has remarked, Dr. Atkinson and those holding with him must prove conclusively that it is only found in syphilitic cases, that it does not follow hyperæmia, or occur as the result of cachexia. Dr. G. H. Fox [1] in a paper written some time since, contends that the so-called pigmentary syphilide is not a direct manifestation of syphilis, but a non-specific vitiligo, which, though syphilitic in origin, cannot be classed among syphilitic lesions, and that the whitish macules seen in this affection are not white by contrast, but as a result of the direct loss of pigment, the hyperpigmentation being really of secondary consequence. [*Transactions Am. Dermatological Asso., 2nd Annual Meeting, Chicago Med. J'l & Exam., Oct.* 1878.

The so-called Xeroderma of Hebra (*Angioma Pigmentosum et Atrophicum*).—Since the reading of R. W. TAYLOR'S brilliant and elaborate paper on the Xeroderma of Hebra, of which he records seven cases, at the first meeting of the American Dermatological Association, Duhring [1] has thoroughly studied another instance of the affection, and Taylor [2] has extended his observations in regard to his original cases. Duhring's patient was a girl of 17. When six months old the affection made its appearance on the face in the form of ordinary freckles, which gradually extended over the whole body. The early history is not satisfactory. When first seen by D. the lesions presented were of a three fold character—pigmentary, telangiectasic and atrophic. The pigmented spots averaged the size of pin-heads;

1 American Journal Medical Science, April 1878.

2 Transactions Am Derm. Asso. N. Y., 1879.

the telangiectases are not numerous, and are small and ill-defined, pin-head sized and of a deep red color. The atrophic spots are likewise few and scattered, occurring in between the freckles. They are about as large as the lentigines, and have a whitish, glistening appearance. The atrophic feature in this case is very insignificant. D. thinks the pigmented spots are the first symptoms, followed after a while by the development, here and there, of telangiectases, which latter, in the course of time, contract and atrophy, and finally disappear, to be followed by the atrophic macules. From a consideration of this case D. was led to believe that such marked atrophy as Hebra Kapos' and Taylor claimed, was not a necessary sequence. In his "Further Contribution to the Study of the Xeroderma of Hebra," Taylor points out several noticeable characteristics of this affection, viz: a vast number of pigmented spots scattered over the body, less numerous and smaller red spots, and in addition atrophied patches and certain tumors. According to S., the course of this disease is about as follows: After a general hyperæmic stage, dilatation of capillaries, which increase in size by new growth of their elements. This gave rise to the red spots which constituted the *first stage* of the affection. After a variable time these capillary new growths undergo atrophy, leaving the brown spots on their site; this constituted the second stage, while the third stage was occupied in the continual new growth of vessels upon the site of those already atrophied, and in subsequent atrophy of the skin itself. There are undoubtedly two types of the disease, according to T.,—one in which the morbid process is limited to pigmentation, with slight atrophy; another in which terrible disfigurement results. Among the sequelæ of the disease, was noted the formation of numerous tumors about the face in the severest cases. These tumors he considered inflammatory growths of the skin, largely made up of blood-vessels. T. thought that perhaps in the severe forms of Xeroderma patients might be predisposed to malignant growths about the face, as seemed to be the case in a patient of Dr. Heitzmann's. [*Am. J'l Med. Sc., Oct.*, 1878.

Disseminated Follicular Lupus.—Tilbury Fox describes a form of lupus attacking the face, which bears a strong likeness to acne. The distinguishing characteristics are: 1st. The character of the substance, and especially the base of the

separate spots, which differed from every form of acne in lacking the characters of inflammaatory infiltration, exhibiting, on the contrary, all the features of lupus tissue; the disappearance of the smallest nodules left behind definite scars. 2d. The indolent, non-inflammatory nature of the eruption, each nodule remaining indefinitely, unless destroyed by caustic, and reappearing unless the destruction has been thoroughly performed. The microscopic examination confirmed the clinical diagnosis. The treatment consisted in the internal use of cod-liver oil, iron, etc., and, locally, the destruction of the nodules by the acid nitrate of mercury. (*Lancet Oct*, 4, 1878.)

Recovery from Leprosy.—HUTCHINSON related to the Royal Medical and Chirurgical Society an instance of complete arrest of the progress of true leprosy. The subject of the case had been under Mr. Hutchinson's observation for 27 yeas. She is a Jewess, of English parentage, who had lived only in England, and in whose family no leprosy taint existed. At the age of 32 the patient went to live in Jamaica, and twelve years later she returned with leprosy in a severe form. For twenty years the patient has considered herself well, although there is still paralysis of one ulnar nerve, many patches of skin are deficient in sensation, and there are permanent changes in the eyes; in other respects the cure is complete, and the patient enjoys excellent health. Mr. Hutchinson ascribes the cure to change of residence, and especially the cessation of a fish diet, he being a strenuous advocate of the theory that leprosy is due to a nearly exclusive fish diet, especially unwholesome and tainted fish. (*Lancet, Feb.*, 15, 1879.)

Chaulmügra Oil in Leprosy.—YOUNG has obtained some apparent results from the administration of this drug, which is a fixed oil, obtained from the seeds of the Gynocardia Odorata, one of of the Bixineæ, found in the forests of Eastern India. It has been held in high esteem in India, from time immemorial, in the treatment of leprosy. Young sums up his experience in regard to its value as follows - (*a*) In the macular and in the early stages of the anæsthetic variety, the oil seems to be of decided value. (*b*) It should be given at the outset in small doses, and gradually increased, otherwise it is apt to nauseate. (*c*) The powdered seeds seemed to produce speedier results than the oil.

General Treatment of Leprosy.—Fox says there is no specific for leprosy, but that the skin condition may be greatly ameliorated by the use, mainly externally, of certain oils, such as the Cashen, Gurjun and Chaulmügra, but after awhile the disease returns. Besides the best mental and physical hygiene, F. has great faith in quinine in extreme doses. (*Med. Times* and *Gaz., Dec.* 21, 1878.)

Rodent Ulcer.—An interesting debate on Rodent Ulcer occurred in the London Pathological Society, giving rise to a number of different views as to the pathology of the affection. Mr. Hutchinson regards the most typical form of the disease as affecting the upper portion of the face; in other words, according to him, a sore situated above a line drawn from the lobule of one ear, across the face, below the nose, to the other ear, would be a rodent ulcer, and not an ordinary epithelioma; and it would be much slower in its growth, less proliferative on its surface, and less likely to infect the neighboring lymphatic glands. Other authorities had seen the affection typically, on other parts of the body, although acknowledging the face to be the usual site of election. Dr. Tilbury Fox regarded the disease as originating in the outermost layer of the hair-root sheath, corresponding with the rete mucosum of the skin. Dr. Thin argued that the process commenced in the sweat-glands—an adenoma of the sweat-glands. Mr. Parker had not been able to detect any well-marked histological changes in rodent ulcer which were not present in epithelial cancers, and *vice versa.* (*Med. Times and Gaz., Dec.*, 21, 1878.)

Rodent Ulcer and Lupus Treated by Erasion.—Lucas sanguinely recommends, after Volkman, the treatment of lupus by erasion with the sharp spoon; and Squire likewise gives his testimony as to the value of a similar procedure in rodent ulcer. (*Lancet*, Feb., 22, 1879, —*Med. Times and Gaz.*, Nov. 2, 1878.

Sodium Ethylate in the Treatment of Nævus—This drug made by adding metallic sodium, piece by piece, to absolute alcohol, in a wide-mouthed bottle, until effervescence ceases, a crytalline substance being deposited, is recommended by Brunton in the treatment of nævus. The scar-tissue which results was described as slight. (*Lancet*, Nov. 22, 1878.)

Case of Inflammatory Fungoid Neoplasm.—Duhring has exhaustively studied an exceedingly rare skin affection which he reports under this name. Hebra had met with two similar cases,

one in 1872 and the other in 1874. The patient was a married woman of 58, whose only cutaneous trouble had been a vesicular eczema, followed by repeated attacks of urticaria. The first manifestation of the present malady was a red spot on the forehead, dime-size, not inflammatory, closely resembling a superficial burn. It gradually increased in size, and in about ten months began to rise slowly above the level of the skin, was purplish hued, and looked like a boil. No subjective symptoms. Later, a number of tumors, of various character and sizes, appeared on scalp, forehead, face, and also on the trunk and extremities; they came suddenly, and some of them disappeared as rapidly as they came. When D. first saw the case, in October, 1877, there were five distinct lesions, consisting of different kinds of tumors, tubercular elevations, and flat patches, some of which looked like T. versicolor, which later gave rise to itching and considerable pain. The lesions presented were of two principal sorts—flat patches, and the round tumor-like growths. The former were of various sizes, slightly elevated, dry, scaly, chapped-looking and furrowed, and having a yellow pigmentation. The tumors were of the bigness of a split pea to that of an egg, some being soft and others firm to the touch. The growths were either smooth and tense, or were excoriated, in which case they oozed a serous and bloody fluid, and were distinctly furrowed or lobulated. The involution of the tumors left pigmentation but no persistent scarring. The microscopic examination showed the growth to be a peculiar inflammatory new formation, consisting essentialiy of a disseminated infiltration in the corium and subcutaneous connective tissue of small round cells. [*Transactions Am. Derm. Asso. and Archives of Derm., Jan.*, 1879.

Case of Ulcerative Scrofuloderm.—Van Harlingen read an account of this case before the Dermatological Association at Saratoga, Aug. 1878. The subject of the paper was a woman of 70 years, who at the age of 50 noticed a slowly-increasing roughness of the skin, and later, small gray patches appeared; these ulcerated at times. When seen in February, 1878, the whole body was covered with fine scales; the skin was of a brownish-red color, except on the legs, where it was ashen gray. In many parts were deep suppurating ulcers. About the elbow were a group of hard, gray nodules. Former cicatrices left ir-

regular patches of dead, white skin. There were numerous smooth patches on the body, denuded of epithelium, and slightly exuding. Scalp unaffected, except in temporal and parietal regions; the point of the nose was uninvolved, although on other parts of the organ were non-ulcerating, hard, tuberculous lesions. Below the knees the affection diminished in degree, but the lower part of the legs looked like ichthyosis. Soles of the feet not involved at first, and the palms only to a slight degree. After some temporary improvements the ulcerations increased in number and severity, and the patient finally succumbed to exhaustion. Autopsy showed calcareous nodules in many organs, and enlarged glands at the base of the lungs. These facts, and a history of scrofula in her family, had induced the reporter to look upon the affection as a scrofuloderm. [*Transactions Am. Derm. Asso. N. Y.*, 1879.

PARASITIC AFFECTIONS.

Botanical Relations of the Trichophyton Tonsurans.—ATKINSON'S interesting paper on this subject is thus summarized in the Transactions of the American Dermatological Association: The method of cultivation advocated is the "cell-culture" of Van Tieghm and Le Monnier, employed in their researches into the mucorini. A glass ring, four to five mm. in height by about fifteen mm. in diameter, is cemented to a glass slide; the fungus is then sown in an appropriate nutritive fluid upon a very thin cover-glass. The cell is then completed by laying the cover-glass, with the nutrient drop underneath, upon the ring, a drop of oil upon the latter serving to protect the cell from external influences. Into a cell like this a small bit of hair-shaft is sown. Orange-juice and Pasteur's fluid, boiled and filtered, are the most appropriate fluids. In most of the cells there will be no change, while some will develop mould of adventitious growth, or bacteria. In a few cells a development takes place which is characteristic and due to the trichophyton. It may easily be distinguished from growth of foreign fungus; the latter either thrusts its hyphæ from without under the cover-glass, or springs from one or two points in the drop, and sends out radiating hyphæ, the trichophyton spores remaining quiescent. The successful cultivation shows a simultaneous, uniform, multitudinous growth of hyphæ, sometimes accompanied by swelling of the spores to many times their original size. The latter, however, soon ceases as the hyphæ increase. This activity begins to

show itself in from twenty-four to thirty-six hours, or even later, and is completed in about ten days. The tendency of the hyphæ, when freely nourished, is to form a dense myceline and but few reproductive organs. When scantily nourished, these organs more rapidly appear, either with or without the formation of septa in the hyphæ. These reproductive organs are sporangial. They do not produce, except occasionally, columellæ, there usually being transverse septa dividing them from the hyphæ. The sporangia of mucor may be arrested or deformed by unfavorable influences. There is also frequently shown an indication of brood-cell formation, as occurs in mucor mucedo. This in cell-culture is never completed. Under more favorable influences these probably really form brood-cells. The fungus, then, belongs to the mucors, and is probably mucor mucedo. [*New York Medical Journal, Dec.*, 1878.

The Skin in Tinea Tonsurans.—Taylor presented some microscopical sections of the skin in *tinea tonsurans*, to the Royal Medical and Chirurgical Society, which he thinks warrant the following conclusions: That the fungus invades the hair proper and advances in its substance down towards the bulb; that it never advances far into the bulb, or attacks such tissues as the root-sheaths; that its growth in the follicle is determined by the supply of hair from the papilla, the freshly-formed soft cells resisting its action till they, in turn, assume the characteristics of the proper hair-substance; that, should the papilla fail to form new hair substance, the fungus must shortly starve. He thought that epilation would not ensure the extraction of the fungus, as the hair will give way at the shaft, leaving mycelium threads near the bulb, ready to advance on the new cells as they become hair. Either a natural, or, if possible, an artificial falling of the hair would, by separating the hair at the papilla, effectually turn out the disease, re-infection of the new hair being prevented by the contraction of the follicle walls around the retracting stump. [*Med. Times and Gaz. Nov* 23, '78.]

Animal Parasites of the Skin.—Bulkley, in the treatment of scabies, recommends styrax as efficacious, and advises its use especially in women and children. For women a good formula is—

R	Styracis,	ʒi—ʒii.
	Ung. Sulphur.,	ʒiii—ʒiv.
	Cerati,	ʒi.

He considers kerosene one of the most effectual destroyers of pediculi capitis.—*Boston Med. and Surg. J'l*, 16-30, 1879.

Piedra, Trichorexis nodosa, Tinea Nodosa.—CHEADLE and MORRIS, as the result of their studies, believe there are at least three distinct diseases of the hair characterized by nodular enlargements and splitting, viz: The piedra of Colombia, trichorexis nodosa of the Germans, and a parasitic affection, which might be called tinea nodosa. Mr. Morris exhibited to the London Pathological Society some microscopical specimens of the hair affection called piedra, which is peculiar to one State in Colombia, where it was first described in 1874. The disease is always limited to the hair of the head, generally in women. It begins half an inch from the root of the hair, and consists in a series of one to ten nodules on each hair, the nodules being hard and gritty. The nodules were found to consist of a mass of pigmented spore-like bodies, the whole mass radiating from one cell, which buds radially in all directions. The surface cells become darker, and the hair-shaft becomes constricted by the fungoid growth. The fungus is highly developed. The affection is said to be non-contagious, and to arise from the use of a certain oil employed by the native women as a pomade. [*Lancet, Feb. 8th, and March 22*, 1879.]

Trichorrhexis Nodosa Barbæ.—DR. ERNST SCHWIMMER maintains that the nodular disease of the hair, otherwise called trichoptilosis and fragilitas crinium, is not of parasitic origin: that the parasitic elements found entangled only in the nodosities of the hair are simply accidentally deposited there. S. thinks himself authorized by his investigations to say, that this disease consists in deranged nutrition of the hair, which is indicated by narrowing of the "root part," partial destruction of the medulla and the disorganization of the cortical portion at certain points, where it has burst its external covering, permitting a fibrillated appearance. He does not regard piedra as parasitic, but as nothing more than trichorrhexis. [Those interested in this subject should consult a valuable and highly interesting paper by Duhring on a "case of an undescribed form of atrophy of the beard."—REP.] *Vierteljahr f. Derm. u. Syph., u.* 581, 1878.

1 Am. J'l. Med. Sc. July 1878.

TRANSLATIONS.

DOUBLE UTERUS AND VAGINA.—A FŒTUS IN EACH UTERUS.

By Dr. Sotschawa.

Patient aged 26 years; has miscarried once and has once been delivered (a year ago,) of a child at term. She is again pregnant about three months. Patient consulted Dr. S. for violent hemorrhage. At the first examination, the doctor only detected one vagina and one uterus. Pregnancy in the second month; miscarriage. Patient herself directed his attention to the abnormal condition of her organs of generation, of which she had been informed by her former attendent. The following condition was found:—external organs normal; 1 cm. (.39 inch.) above the introitus vaginæ an uninterrupted septum begins, which completely divides the vaginæ; there are two complete uteri, both pregnant. The left uterus contained a fœtus of about 1½ months, and the right one of about 3 months. The author regards this as a true case of superfœtation.—[*Reviewed by Schwarz, in Centralblat für Gynäkologie, March* 15, 1879.]

E. E.

THREE ABDOMINAL SECTIONS IN THREE YEARS IN SAME PATIENT.

By Dr. Baumgartner, (Baden Baden.)

Patient 33 years of age. Multilocular ovarion cyst of the left side. Ovariotomy in September, 1875, without any antiseptic precautions, except that the abdominal cavity was washed out after the operation, with a few litres of water of 30° R. Pedicle clamped; drainage through the space of Douglas. Recovery:

patient got up on the 34th day, the wound being then completely cicatrized.

Until December, 1876, patient was quite well; then, after some unusual exertion, she was seized with fever pains in the wound, which gradually increased until she was unable to move in bed. The evacuation of urine became extremely painful. An examination suggested no other explanation than traction on the pedicle and probably adhesion between it and neighboring organs.

Laparotomy in March, 1877. The pedicle adhered to the posterior wall of the bladder, to the omentum and to a few folds of intestine. The adhesions were divided, the pedicle was dropped into the abdominal cavity, and the affected portion of omentum was included in the sutures of the wound. Recovery after several weeks. The following "toilet" is recommended by the author: To one extremity of strips of good adhesive plaster, of one finger's breadth, and 8 to 10 centimetres (3 to 4 in.) in length, small eyelets are fastened. These strips are applied at right angles to the wound and 2 centimetres from its edges; enough strips being applied to make the two rows extend beyond the wound above and below. The opposite eyelets are then threaded and drawn tightly together until the edges of the wound are in close approximation; the threads are then knotted. In this way the wound itself is not covered with plaster, it can be easily examined and cleansed, and is not subject to traction during a change of dressing.

In January, 1878, severe pain in the right ovarian region supervened, which became more intense at each menstrual period, until it became insupportable. Uterus normal. Along the ovary, a distinct swelling is felt, as a thumb, extending to the left terminalis and fixed there, so that the ovaries and the swelling seemed immovable. Fever every evening; patient much reduced.

Castration, August 19th, 1878. Ovary and tube removed; suppurative salpingitis. Ovary normal. The funnel of the tube united to the ovary, the fimbriæ agglutinated and forming with the funnel a tense sack, as thick as a thumb and filled with cheesy pus. Its walls were so thin in some places, that rupture might have occurred at any moment. The tension of the integument was relieved by silver loops, applied as follows: the needle is thrust obliquely through the integument about 4

centimetres (1½ inch.) from the edges of the wound and passed out on the other side at the same distance; 2 cm., (4-5 inch.) lower down on this same side the needle is again introduced and carried back to the first side at a corresponding distance. The patient left her bed on the 16th day—quite well.—[*Reviewed by Schellenberg in Centralblatt, für Gynäkologic, March* 15, 1879.]

E. E.

DIFFICULT DETERMINATION OF SEX.

BY DR. SIPPEL.

In the child of a primipara, aged 22 years, there was found in the median line below the symphisis, a cylindrical organ two centimeters (.78 inches) in length, and one centimeter (.39 inches) in thickness, with a well-defined glans and prepuce; on the under surface was a groove lined with mucous membrane, which terminated at the root in an opening through which the catheter passed into the bladder. On each side was a "skin-cushion," well padded with fat; these could be interpreted either as labia majora or as scrotum fissum; they contained no testicles, neither was there anything to correspond to a vaginal opening, or to labia minora. Examination per rectum detected neither uterus nor ovaries, but only a small round body which the author thought was the prostate, wherefore he declared the child to be a male.

At the age of 3½ weeks the child died and the post mortem demonstrated the existence of all the female organs of generation; the body of the uterus was atrophied, and only the cervix (which had been mistaken for the prostate) was normally developed. The vagina terminated in the urethra an inch and a half above the external orifice. [*Reviewed by Schwarz in the Centralblatt für Gynäkologie, March* 15, 1879. E. E.

STRICTURES OF THE URETHRA IN WOMAN.

Dr. Emile Fissiaux thus summarizes his conclusions at the close of a paper on the above subject.

I. Strictures of the urethra in woman are rare, but they are perhaps less so than might be thought, for the dilatability of the canal prevents symptoms from appearing when the affection is little marked.

II. The causes which in woman produce urethral stricture, are chiefly specific urethritis and traumatism (certain cases of dystocia). Syphilitic ulcerations and soft chancre of the canal may also by their contraction greatly diminish the calibre of the urethra.

III. The affection is already far advanced when the first symptoms appear. Diminution of the stream of urine, difficulty of micturition, phenomena of cystitis, sometimes complete retention with or without incontinence, such are the symptoms which draw the physician's attention to the urethral affection. Catheterization will indicate the seat and degree of the contraction.

IV. Stricture of the urethra in woman may coincide with vesico-vaginal fistula. It may also be the cause of it. Finally it may have as a consequence an irremediable affection: incontinence of urine.

V. Strictures of the urethra in woman have been treated in different modes. Internal urethrotomy was employed twice with success. However, this mode should be rejected as dangerous. It is the same with regard to rapid dilatation. The two principal curative modes are progressive dilatation and electrolysis. This last mode of treatment seems to give in woman remarkable results. It should always be employed when dilatation is not possible, especially in cases where puncture of the bladder seems necessary. [*Annales de Gynécologie, March,* 1879. E. M. N.

EDITORIAL.

DR. A. J. STEELE, *Editor.* DR. W. A. HARDAWAY, *Associate Editor*
PROF. E. W. SCHAUFFLER, M. D., *Corresponding Editor.*

"It is not so much what you ought to do, as what you ought to know not to do."—*Sir Benjamin Brodie, Lectures*, 1837.

THE CAUSE OF THE LOW MORTALITY RATE OF ST. LOUIS.

WITHIN a few days past we have been requested by the King's County Medical Society (through, we presume, Dr. R. M. Wyckoff, Secretary of the Society, and Register of Vital Statistics of Brooklyn) to give, editorially, the cause of the low mortality of the City of St. Louis, as found recorded in the last, April, number of the COURIER, on page 482, and which we reproduce here:

MORTALITY TABLE.

CITIES.	ESTIMATED POPULATION.	DEATHS DURING THE PAST MONTH.	DEATH RATE PER 1000 LIVING.	
			FOR PAST MONTH.	FOR PAST YEAR.
New York	1,093,171	2,260	26.78	23.42
Philadelphia	876,118	1,256	18.77	21.57
Brooklyn	564,448	886	20.40	20.15
St. Louis	500.000	425	10.88	12.00
Chicago	460,000	533	11.60	16.50
Boston	375,476	605	22.09	20.10
Cincinnati	280,000	418	19.46	15.81
New Orleans	210,000	346	21.41	

We are glad this inquiry has been propounded, and will, as far as limited time allows, endeavor to answer it. There has been among the chief sanitarians and registrars of Vital Statistics of our country continued incredulity as to the low death rate of St. Louis, so much so that they have

refused in many instances to publish it. See the *Boston Medical Journal* for the past few years; even the proceedings of the Medical Society of the County of Kings, April number, page 59, fails to give the percentage, and while no attempt is made to disprove it, yet it is quietly hinted that there is "no uniform system of collecting death-returns, and that the estimated populations are in some places increased in an extravagant ratio." Of course this remark has reference to St. Louis among other cities. We would say, if there is any deception in our returns, it is not intentional; to arrive at the truth will be our constant wish and endeavor. If error exists it must be that all the deaths occurring within the city limits are not reported, or that the estimated population is much too high, or that in both of these particulars erroneous returns are made.

First,—Are all the deaths reported? It is not probable that any interments are made in the cemeteries of St. Louis without being reported at the Health Office; for each sexton is liable to heavy forfeiture for neglecting so to do, weekly. Physicians, too, are liable in large amounts if they neglect to make proper returns of deaths occurring in their practice. Certain restrictions are enforced, whereby physicians and sextons are checks one upon the other, and the health commissioner on both. None but graduates are allowed to practice medicine. All physicians must register. No sexton receives a death certificate that is not signed by a registered physician and counter-signed by the health commissioner. Heavy fines are enforced in case of refusal or neglect to comply. In short, all known means are resorted to whereby every burial shall be reported, and from our personal investigation of the matter we believe it is so done and accurately recorded.

Second,—Is our estimated population much too high? By every known means of estimate, except actual count, it is not. The census of 1860 and 1870 gave a relation of total population to the names in the city directory of 4½ to 1. The directory for 1878, gave 120,000 names, which by the former ratio would make a present population of 540,000. Whereas we have been calling it only 500,000,

by which figures we obtain the low percentage for 1878, of 12 deaths in 1000 inhabitants; the most healthful city of its size, and one of the most healthful in the world. Concede even 450,000 inhabitants and we have a per cent. of 13.34; or of 400,000 and we have 15 per cent. only—still lower than any other city of that size. Twist the figures and speculate as we may the fact remains that St. Louis is a most remarkably healthful city.

Of course we, with many statisticians and sanitarians, are anxiously awaiting the results, in numerous cases, of the national census of 1880, so near at hand that we can be very patient until the *facts* are known.

Third,—Why is St. Louis so healthful? Its mid-continental position saves it from many of the influences that injuriously affect human health on the sea-board. "We enjoy an unusual amount of fair weather. Our autumnal season is celebrated for it; and also in other parts of the year fair weather and bright sunshine prevail to the great benefit of organized life and the well-being of the human family."

"Our summer rains mostly descend with great abundance and in a comparatively short time," thus thoroughly washing the surface of our well-graded streets, and flushing the sewers.

The city is about 350 feet above the level of the sea; it rises gently from the river level onto three broad terraces, miniature plateaux, with intervening declines; the highest terrace, the most inland, being 200 feet above the river. This conformation of the surface allows of admirable fall for drainage. There are 180 miles of sewerage, with sufficient fall for rapid emptying into the river, which, with quick and never failing current, carries from the city front all refuse material. There is an average daily consumption through 180 miles of pipe, of pure river water, amounting to 22,000,000 gallons, or 8,030,000,000 gallons a year; this, flowing through the sewers, with an occasional sharp rain-fall, keeps them well flushed. The most admirable method at present employed of settling our water, has much to do, we believe, in the improved sanitary con-

dition of the city, over what it was before the employment of the necessary reservoirs for this purpose, now some eight years ago. Under the surface soil is a sub-stratum of lime rock, which doubtless acts the part of a drain and thus very largely keeps the soil dry. The city is not crowded, for it includes 40,000 acres, with 2,107 acres of park area.

We are mostly free from the malarial influences of the river bottoms, and our few fevers are not of a malignant type.

The prompt and efficient action of our health department, looking to the prevention of epidemics by thorough vaccination, abatement of nuisances, and the occupancy of subterranean quarters, preventing overcrowding of tenement houses, interdicting the sale of unwholesome meat, vegetables and milk, prompt removal of dead animals and slops, regulation concerning the construction and cleansing of privies, has had in all these matters its influence in preserving the public health.

While we have pride in the sanitary condition of our city, rejoicing that its death rate is so low, yet we realize it is much too high, that there are preventable influences at work which should be abated, and thus the public health be still further conserved.

It has been suggested that the sulphurous fumes generated and set free in the combustion of our universal fuel, soft coal, may have a disinfectant effect on injurious air contaminations. Also that the dust from our pulverized macadam contains sufficient free lime to disinfect.

Fourth,—The table given above was compiled for the four weeks ending March 15, 1879. The number of deaths occurring for the same period in 1878 was 384, being 41 less than for the present year, so that it need not be a matter of surprise that the death rate of our table, for St. Louis was so low, but rather that it was so high.

St. Louis has been remarkably free from epidemics. Within our recollection there was the cholera in 1866-7 and the small-pox a few years later. With those exceptions, we have been exempt from contagious diseases such as scarlet fever, cerebro-spinal meningitis, diphtheria, etc.

A. J. S.

CORRESPONDENCE.

NEW YORK LETTER.

Reform in the Dispensing of Medical Charity—Small Pox.

Mr. Editor :—The subject of reform in the dispensing of medical charity, as it affects physicians, has of late been exciting a great deal of attention among the profession in this city, on account of the reading of a paper by Dr. F. R. Sturgis, of this city, on the "Responsibility of the Medical Profession for the Abuses of Free Medical Services." This paper was read before the New York State Medical Society, at the February meeting, and the subject being deemed of so much importance that a full discussion could not be had, because of the pressure of other business, was referred by that body to the various County Medical Societies for action. The paper was read before the New York County Society, at the March meeting, and came up for discussion on Monday evening last. Dr. Sturgis is House Physician of the New York Dispensary, one of the largest dispensaries in this city; his remarks therefore are worthy of very careful consideration by the medical profession throughout the United States, and especially in the large cities, where no doubt the same abuses prevail.

Dr. S. commences by stating that, in 1873, the number of free patients treated in the dispensaries and hospitals in this city was 280,536; or about from 30 to 35 per cent. of the whole population, the number of inhabitants being somewhat over a million, was receiving gratuitous medical advice. As a partial remedy for this state of affairs, the trustees of the New York Dispensary, in 1876, began to charge the venereal patients, who could pay, the sum of ten cents for each prescription furnished. Those who were utterly destitute, or who, after careful investigation, were found to be unable to pay even this small amount, were allowed to have their medicine free of charge. It was found at the end of the first year, that 90 per cent. of the male and 50 per

cent. of the female patients were able to pay for their prescriptions; at the end of the second year 95 per cent. of the males and 77 per cent. of the females, treated in the venereal class, were contributing toward the expenses of the dispensary. This plan was found to work so well, and as it was deemed unfair to make any distinction as to the class of patients who were treated free, the charge for medicines was extended to all classes of patients who were able to pay. This was sometime during April of last year. As a result it was found that 95 per cent. of the male and 93 per cent. of the female patients paid for their prescriptions, and that the revenue to the dispensary from this source, in 1878, was $3,472, whereas, in former years, when the medicines were given free of charge, and the sum had to be made up by the patrons of the institution, there was often a deficit. The reader of the paper suggested that the various County Medical Societies should protest against granting charters to hospitals and dispensaries, where they are deemed unnecessary. Next, that dispensaries and hospitals should exclude from the benefits of their institutions all those who, on careful examination as to their means, were found to be able to pay a physician the minimum sum of one dollar, and to charge those who were unable to pay the minimum fee above mentioned a small sum for medicine, giving the latter gratuitously in cases of extreme destitution and want. Also to pay the attending physicians a salary for their services, and to reduce the staff to one half its present number. Another, and the last, suggestion was to the effect, that a certain number of physicians should open a dispensary or dispensaries for themselves, the patients to be charged a certain fee for the medical services and medicines, and that the institutions should be under the control of a Board of Trustees, composed wholly of medical men. These are the main points in Dr. Sturgis' paper.

In the discussion which followed, some very interesting statistics were presented. It was said that there were nineteen hospitals in this city, having a staff of 275 physicians, with a yearly average of seven thousand eight hundred patients. The number of dispensaries is twenty-six, with 437 physicians and about 300,000 patients yearly. It was urged that a great deal depended upon the doctors, who failed to act with any degree of unanimity in regard to the matter, and also to the fact that a great many physicians, in good practice, are in the habit of

sending patients to the dispensaries for treatment when they are able to pay a small fee. Doctors holding dispensary appointments often treat patients of the middle classes free of charge, so that they may be able to show interesting and rare cases at their cliniques. It was also said that since the rule of charging has been put in force, and it has been adopted in other dispensaries besides the New York, that some of the members of the various attending staffs have offered to pay for the patients' medicines, provided they could be treated at the dispensary. When the out-patient department of the New York Hospital was first instituted, circulars were issued, stating that patients could be treated there at the rate of one dollar a month, and ten cents for each prescription, no distinction whatever being made as to the condition of the patient, from a pecuniary point of view. This plan was greatly condemned by the medical profession and the press, and I believe has been somewhat modified, by allowing the poorer classes to come for treatment free of charge. Still there is the objection that no inquiry is made as to the ability of the patients to pay more than one dollar.

The constitutionality of charging the ten-cent fee was discussed, and some of the members expressed the opinion that the dispensaries in which a fee was charged were acting in violation of their chartered right. Objections were made to the establishment of provident dispensaries, because of the demoralizing influences which they exert, and instances were given where, in England, when one dispensary of that kind was formed, several others were established at which medicine and advice would be given at a lower rate; in such cases the profession would degenerate into a trade. The society adjourned without coming to any decision, another evening being set apart for discussion. The following opinions seemed to prevail: No one should be treated at a dispensary or hospital, who could pay a moderate fee. Combined action should be taken by the medical profession, in conjunction with the trustees of the various charitable institutions, towards remedying the existing abuses; unless there is a combined movement, nothing effectual can be done. It was suggested that one means of ascertaining the condition of the applicants for medical aid would be to appoint visitors, giving them a moderate salary, whose duty it should be to visit the patients at their houses, and find out whether they were or were

not able to pay a physician; if they found the applicant worthy, a ticket of admission would then be furnished.

I fear I have trespassed to too great an extent upon your space, but the subject is one, as I said in the beginning of my letter, well worthy of careful and earnest study by all who have the welfare of the medical profession at heart.

The secular press became very much excited over the announcement of the occurrence of a case of small-pox, about two weeks ago, in one of the wards on the east side of the city. The case occurred in a Bohemian family of emigrants, and was followed by another case of the same disease. These are the first cases reported in over a year, and prompt measures were taken for the removal of the patients and the disinfection of the premises. Whenever a case of small-pox occurs, the patient is removed to the small-pox hospital on Blackwell's Island, the house disinfected and the inhabitants urged to be vaccinated; in this way it is expected to prevent the spread of the disease. It is almost impossible, in the absence of a compulsory law on the subject, to prevent the spread of small-pox, as a great many foreigners refuse to be vaccinated under any circumstances whatever. In the last four or five years, since the establishment of the vaccine department of the Board of Health, there have been fewer cases of the disease than ever before.

C.

COMMUNICATIONS.

THE POSITION OF THE SPECIALIST IN RESPECT TO THE GENERAL PROFESSION.

Mr. Editor:—There has been discussed in late numbers of the COURIER a subject of much interest—the subject of specialties. In the last number "W. C. G.," in an able criticism, has set forth clearly the privileges and rights of those medical men who announce themselves as practitioners in special departments. I take the liberty of making a rough summary of some of his arguments, with the intention of subsequently grafting on them, as it were, a few thoughts of my own.

The spirit of the age requires a division of labor, wherever such division will result in improved methods and more perfect knowledge. The people, hence, demand specialties in medicine, rightly thinking that the physician who devotes his life to study and practice in a single department of that widely comprehensive field of learning, other things being equal, will be best qualified. This common belief being right and just, the people ought to be at liberty to seek such special practitioners at will, when necessities occur, nor should there be made objection; neither should objection be made in the case of the special practitioner receiving such patronage without the personal introduction of the family physician, though to receive this would be very agreeable. People will consult mountebanks at pleasure, and will deride any attempt on the part of their customary advisers at interference; why not leave them at complete liberty as concerns men of established reputation and honor? If the laity are to have this liberty—and have it they will, despite all efforts to the contrary—it should follow that the special physicians they consult ought to be entirely untrammeled in the acceptance of such favor. These are some of the doctor's just conclusions, though, as already stated, for purposes of my own, I have not followed strictly his text. It would seem that the profession, in general, must agree with the special practitioners upon these vital points; indeed, already, it is, as "W. C. G." says, "an error to ascribe to the Nestors of the profession a feeling of hostility to specialism." The profession owes a debt of such magnitude to specialists, that it needs must accord them privileges, and first of all a full acknowledgement of their particular attainments, acquired with so much painstaking. If a man gain a solid and honorable reputation for skill in a special department of medicine, why should he not be encouraged to accept all patronage as his proper due, and that, too, without a preliminary cross-examination of each visitor as to whether his possible family physician knows of his coming. Not infrequently, indeed, *such questioning excites offence*, as impuning liberty of action. The debt owed to specialists becomes sufficiently obvious when we consider the invaluable contributions they have made to the general stock of medical knowledge. It is only by patient, persevering and *concentrated* labor that valuable discoveries are likely to be made. Upon the assumption of such labor the very life of the specialist depends; which, while

it is to redound to the common advantage, can hardly be undertaken by the busy general practitioner. In America, particularly, this minute and painstaking labor needs to be appreciated and encouraged. The American people are distinguished for intelligence, courage and self-reliance, but as a people, we lack a due appreciation of thoroughness. We are too prone to be satisfied amidst the rush of affairs with what comes first to hand, and are not always ready to make a halt for the purpose of looking a matter carefully through. Such a people will subdue a continent, plant its soil, open its mines, found cities and then look about for fresh worlds, but it will not be able to build up the highest civilization, it will not be able to develop the arts and sciences necessary to such a civilization. It is now time that we check this all-absorbing hurrying, and begin to learn what life really is, and how to make the most of it. An eminent physician of New York, on being consulted respecting the advantages of a term of study in a German hospital, summed up his experience in these forcible words: "If you don't learn anything else, you will, at least, learn *how to study.*" His remark was justifiable; he had struck the weak point of American training—its superficiality. While the German method of extreme subdivsion of work will not suit the less easily-engaged American mind, their unbounded zeal for thorough work ought to be, and must be, appreciated and adopted by us. Why do we depend directly or indirectly upon Europe for our best text-books, with all our colleges, hospitals and libraries? We lack neither capacity, genius, nor opportunities. *We lack such a training as shall make us detest make-shift and reverence thoroughness.* The time for Jacks-of-all-trades is fast slipping away; the sooner it is entirely past, the better for all. In the present state of medical knowledge, universal wisdom is an impossibility, and though the position taken by the candidate for graduation, who plead in excuse of his ignorance of the history of syphilis that they didn't have syphilis in his part of the country, is not to be upheld, nevertheless, assumption of familiarity on the part of any one person with all the natural branches of medicine will certainly not be allowed. But, while thus speaking in favor of specialism in general, I do not mean to ask the good will of the profession for all who call themselves specialists. It is an easy matter to run through the ordinary course of college study, pick up two or three books on some one

branch, and then set up for a specialist. Such a procedure is beneath contempt, and such men, at the present time, are simply nuisances. A specialist needs to have the best possible education, not only in his chosen department, but also in all medicine. No organ or part of the body can be studied or treated independently, without consideration of the whole system. The coat of arms of a specialist should be the pyramid, a broad, deeply laid foundation, supporting the pointed apex. There are far too many hot-bed specialists who pick up their practice with the easy indifference of the man who first selects a place of residence, and then, without special preparation, decides upon an occupation. The national indifference towards thoroughness, is largely to blame for such possibilities. But, the question is raised, what is the profession coming to if it is to be parcelled out until a patient shall have to consult, at one and the same time, several doctors for his several ailments? I think the sub-division need not be carried so far. Certain organs are so essential to the well-being of the body, that their slightest disorder is serious, and permanent lesion disastrous; these, because of their supreme importance, and because of the delicacy of their structure requiring prompt and efficient treatment, must always require specially-trained practitioners, who shall be always promptly ready to do the best, and be prepared to expend the requisite time and labor. As for the rest, time will bring the remedy. The principles underlying diagnosis and treatment are becoming better known, often through the labors of specialists; while at the same time, medical training is assuming a worthier character, being made more thorough. Medicine has taken great strides in the past half-century, our knowlege has grown more positive. That the profession may, in the future, profit to the full by these advances, I wish, in concluding these remarks, particularly to point out a fundamental and generally acknowledged need; the more careful discipline of the youths who are to carry onward the standard. Of late years I have had only too abundant opportunity to note how imperfect this discipline is. Young men enter college often without any preparation worthy the name, without solid grounding in any of the many branches they expect to familiarize themselves with in the short time they elect for course of study. This is plainly a great and grave mistake; if the colleges are furnished such material they can not be ex-

pected to graduate classes of John Hunters. If the family physician of the present day wishes to preserve his noble and not-to-be replaced fraternity—a preservation none will pray for more earnestly than myself—he can do it only in one way, he must see to it that the young men he sends to college are properly prepared; for this preparation he *personally is responsible*, not the college that receives them as they are. A matriculant should have already an extensive acquaintance with anatomy, physiology, chemistry, also with the principles of botany; he should besides be familiar with the use of the microscope, and have studied the tissues, both healthy and morbid—in other words, have learned something of histology and pathology. The student had much better be posted on these essentials than have confined his anti-collegiate experience to a hap-hazard and promiscious snatching of clinical facts in the office, which he can not well comprehend nor properly classify. The college, which should of course have abundant clinics, will give the *prepared student* more practical information in a few weeks than he can obtain at home in years.

Such a preparation is not too much to ask; any ambitious young man of sufficient capacity to make a doctor, ought to be able, under proper direction, to attain it within the space of a year and-a-half. Familiar already with the bones and muscular attachments through actual inspection of the skeleton, as well as to some extent with the other parts through reading, in the dissecting room he will be competent to learn true anatomy, the relation of parts, which is what he requires in practice. Such a knowledge of anatomy involves considerable familiarity with physiology, which will be intensified through study of the structure and functions of plants. The microscope is already so indispensable in medicine, that readiness in its use is of self-evident importance as a help in diagnosis. Thus prepared, the student will make such extensive progress in the college, that when engaged in practice he will be able to hold his own, even in these days of growing specialties, as a general practitioner. Respectfully,

CHARLES A. TODD.

St. Louis, April 18, 1879.

"TRICHIASIS AND DISTICHIASIS."

MR. EDITOR.—I scarcely know whether I am bound in courtesy to take any notice of the flood of scolding which the Professor of Histology and Ophthalmology in the Missouri Medical College has turned upon me in your last (April) number. Certainly the retort *tu quoque* [1] is altogether foreign to the question at issue, and I shall hold myself excused from more than this passing allusion to its use, not to say abuse, by the Professor.

Briefly, and divesting the subject of all verbiage and irrelevant matter, I have shown that the Professor gave, in your February number, a description of distichiasis which bears a very close resemblance, both in its substance and in its phraseology, to other earlier descriptions of which he made no mention. This omission, on the part of the Professor, I supplied by quoting three paragraphs, from as many text-books, which, for convenience of comparison, you were obliging enough to print in connection with his description, in parallel columns in your March number. The resemblance referred to is certainly striking—so striking that I am at a loss to explain it, even after the Professor's effort in the same direction.

I am able to add another to the Professor's list of writers [2] who have not described distichiasis, or who have not described it so adequately as he would appear now to require, viz: the Professor himself, in his somewhat exhaustive article which appeared in the *Saint Louis Clinical Record* for October, 1875.

In discussing the treatment of trichiasis, the Professor tells us that for some twenty-two years he has been searching, more or less continuously, to discover a sure means by which to destroy the papillæ of deviated eyelashes. Now it so happens that the text-books on ophthalmic surgery are teeming with descriptions of devices designed for and more or less perfectly adapted

1 A favorite argument of the street boys, who generally put it in the colloquial form, *you're another*.

2 The Professor is in error when he assumes that I have charged him with misrepresenting Mr. Carter in his extract upon this subject from the work of that author.

to this very end; and again I have supplied the Professor's omissions, by quoting from several authors who have described before him the very devices which he seems to have thought original with himself.

The special points upon which I have shown that the credit of original invention belongs elsewhere than with the professor, are briefly these:

(*a.*) The application of the galvanic cautery to the destruction of the papillæ of deviated eyelashes—tried by the Professor for the first time in 1869, and rejected by him as not admitting of proper regulation of the extent of tissue to be destroyed.

Believing that the Professor claimed this as an original application of the galvanic cautery, I cited authorities to show that it was already old when he first tried it, and as he had evidently not succeeded well in the application, I added a reference to a published description of a method not noticed by the Professor, but which I believe to be both convenient and manageable in its application and adequate to produce the effect desired.

The Professor's reply to this criticism is to "disclaim the invention of the galvano-cautery procedure," but he still leaves it somewhat doubtful, whether he includes in his disclaimer the application of the procedure to the destruction of the papillæ of deviated eyelashes, which is the proper subject-matter of the criticism.

(*b.*) The destruction of the papillæ of a deviated eyelash by fused lunar caustic applied as a thin coating upon the tip of a fine probe.

This also, I showed to be an old procedure, and cited my authority, (not Malgaigne, as the Professor would have it, but Malgaigne's translator.)

In reply, the Professor puts in the plea that "the matter being one of such small moment, he [I] never hunted it up."

If the matter was worth the Professor's putting it forth in a manner to admit of the inference that he considered it his own invention, it was perhaps equally worth the while to show that he was mistaken, and that it really belonged to somebody else.

(c). Pagenstecher's stitch—spoken of by the Professor, ST. LOUIS COURIER OF MEDICINE, I, p. 138, as "*my little operation.*"

To my quotation of an earlier and very accurate description of the procedure thus claimed by the Professor, he replies that

"it was only mentioned cursorily" by him, and that he "was not aware that it had been applied" as described.

(d). The employment of galvano-puncture as a means of destroying (cauterizing) the papillæ of deviated eyelashes—called by the Professor, "*my electrolytic method.*"

I can only repeat that an accurate description of this procedure, as applied to the destructive cauterization of the bulbs of deviated eyelashes in trichiasis, is given in one of the most prominent and best known of all the German text-books on Ophthalmology, (Himly, Krankheiten und Missbildungen des menschlichen Auges und deren Heilung: Berlin, 1843,) and is there attributed to a French surgeon of eminence. I may add that I was acquainted with the method and practiced it long before the Professor's first publication on the subject in October, 1875.

As the Professor seems not to have comprehended my former statement, I will repeat that the action upon the tissues immediately surrounding the uninsulated tip of the galvano-puncture needle is a cauterization—a cauterization effected without the development of heat, and with the phenomena of a shock at the instant of closing and of opening the battery circuit and of pretty acute pain during the whole period of closure. This cauterizing effect is produced, with not very important differences, at either the anode or the cathode, or at both if two needles are used in connection with the two poles. This particular form of cautery, which differs entirely from the galvanic cautery in which a thin metallic wire is heated by the passage of a current of relatively large quantity, is properly and accurately designated in the work of Bruns, which I cited, as *electro-chemical cautery*, and it is the form of cautery used by the Professor and whose application to the destruction of hair bulbs he claims, wrongly as I believe, to have originated.

(e). The attempt to improve the position of a deviated eyelash, or small group of eyelashes, by producing an eschor in the tissues in front of it.

This appears also to have been brought forward by the Professor as something new in ophthalmic surgery. It is, however, an old and well-known procedure; and cauterizing agents, actual and potential, have been used for the purpose in nearly every possible form. The method has not held its own as applicable except in quite a small proportion of cases, and it is not prob-

able that any one form of cautery will be found to possess very great superiority to all others.

The destruction of deviated eyelashes, as a general method for the radical cure of trichiasis, has been tested over and over again from the days of the earliest writers on surgery. It seems, at first sight, to promise great results from the employment of very simple means, promises which, however, are not generally fulfilled in the subsequent progress of the cases in which the treatment is employed.

It is not my purpose to engage in a personal controversy with any one in your journal; I have criticised fairly a paper which seemed to me to be deserving of criticism, and, having now performed this task, I take leave of the subject.

Respectfully,

JOHN GREEN, M. D.

St. Louis, May 1st, 1879.

BOOK REVIEWS AND NOTICES.

BOOK REVIEWS.

THE NATIONAL DISPENSATORY: Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, including those recognized in the Pharmacopœias of the United States and Great Britain. By ALFRED STILLE, M. D., L. L. D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, in the University of Pennsylvania, and JOHN M. MAISCH, PH. D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. With 201 Illustrations; Philadelphia: *Henry C. Lea*, 1879. 8 *vo.*, *pp.* 628. *Price* $7.50.

Since it became generally known that Professors Stillé and Maisch were engaged in the preparation of the above work, physicians and pharmacists have awaited its completion with no little expectancy.

They have felt with the authors, that: "In the rapid progress of modern research, few subjects have of late years received greater accessions of facts that the group of sciences connected with materia medica and therapentics. The new re-

sources thus placed at the command of the pharmaceutist and physicians have seemed to justify an attempt to make, from the advanced stand-point of the present day, a concise, but complete statement of all that is of practical importance to both professions—a digest, in which, that which is old and that which is new, shall be so brought together, as to give to the reader, within the most moderate practical compass, all the details in pharmacology, pharmacy, and therapeutics which he is likely to need in his daily avocations."

Taking materia medica as a basis, the arrangement of the work is alphabetical; for instance we find pilulæ, potassa and pulveres and liquid amber and liquores in juxtaposition. As it will be used largely as a book of reference this similarity to a lexicon or a cyclopœdia makes it all the more convenient.

Each subject is sub-divided as follows: Origin, Preparation, Properties, Impurities and Adulterations, Physiological Action and Medical Uses. Each division being introduced by its appropriate heading, printed in display type; a simple glance at a chapter, locates the information sought.

Besides the official names of the drugs, the English, French and German names are also given, and no drug takes precedence of another simply by being officinal, all being taken up in alphabetical rotation, and receiving that prominence and length of description which, in the judgment of the authors, they merit.

The text is good style, and the diction pure. To illustrate, we quote a part of what is said of the physiological action of Indian hemp. "Upon man its action varies according to temperament and tendencies. Some it inspires with pugnacity, others it inclines to dreamy contemplation, to motiveless merriment or to maudlin sensibility; some it makes unnaturally active and restless, and plunges others in a drowsy stupor; but more than any other agent, not even excepting belladonna, it perverts the natural perception of objects and their normal condition and relations. Time, distance and sound are especially apt to form the subjects of hallucinations. As in dreams, the events of days or weeks may be compressed into an actual period of a few minutes; objects near at hand may seem to form a limitless perspective, and whispered tones may have the reverberation of thunder. These and an infinite variety of fantastic pictures are evoked by smoking the drug, as it is employed in Asia, generally associated with opium." In the main,

the descriptions and facts are tersely expressed as: "In treating of Therapeutics, the most trustworthy results of clinical experience are concisely set forth, without discussing the grounds on which they rest. This method has proved laborious and has often required a prolonged judicial examination to arrive at a conclusion expressed in a few lines."

The illustrations throughout the work are principally botanical and constitute an important feature. The new chemical nomenclature is used, and in this respect a long-felt want, a work on materia medica and pharmacy in harmony with the recent text-books on chemistry, has been supplied. Temperature is expressed in degrees Centigrade with the equivalent in degrees Fahrenheit enclosed in parentheses.

The appendix contains first a "table of maximum doses," based on a similar table in the German pharmacopœia. "In Germany, physicians are not permitted to prescribe heroic medicines in larger doses than those given in the table, without adding the sign !, indicating that the larger dose has been intentionally ordered."

Such a table should find a place in the next edition of our own pharmacopœia, and for convenient reference, in every physicians visiting list; for it becomes us to use all diligence, and employ means that will decrease the chances of error or misunderstanding. By the use of the cautionary sign in prescribing an unusually large dose of a powerful remedy, the druggist is assured that it is done after deliberation and reflection; the sign being absent, he is expected to disregard the prescription as to quantities, or else be held responsible, if harm result.

Tables of weights, and measures including those of the metric system, are given.

The rules and tables for converting apothecaries' weights and measures into their equivalents in metric terms, of which Professor Oscar Oldberg is the author, are here given.

The mildest criticism that we can pass upon them is, that they are laborious and impracticable and are calculated to retard rather than facilitate a change in the system.

A good index contributes largely to the value of a book, and to the "general index," of this work we find fifty-five pages (three columns each), devoted, the Latin, English, German, French and popular names of the drugs and preparations all being enumerated here.

The "Therapeutical Index" completes the volume. It is convenient and valuable and shows at a glance "all of the more important medicines that have been employed in the treatment of each disease." The student of medicine and the inexperienced will turn to this for instruction, and the busy practitioner will find here his memory quickly refreshed.

In short, we heartily commend the work, as a whole, and feel assured that no one can examine it critically without the conviction that it must take its place at once, among the standard authorities in medicine and pharmacy.

J. M. G.

A Manual for the Practice of Surgery. By Thomas Bryant, F. R. C. S., Surgeon to, and Lecturer on Surgery at Guy's Hospital, etc. With six hundred and seventy-two illustrations. Second American, from the third revised and enlarged English edition. *Philadelphia: Henry C. Lea*, 1879. 8vo., pp. 945. Price, cloth, $6.00; sheep, $7.00.

Very complete for a "manual," being more full and explicit than some of the so-called "Treatises on Surgery." If we were pleased with the first American edition we are now more than gratified with this, its present and second edition. It has been carefully revised, much of it re-written, important additions made to almost every chapter, and eighty-eight new wood-cuts introduced. We thus have an epitome of the main principles and methods of practice of surgery, surpassed by no other English work—practical and still sufficiently full.

The arrangement is simple: Including the elementary principles of surgery, general subjects, tumors, the surgery of the cutaneous, lymphatic, nervous, circulatory, digestive, respiratory, urino-genital, muscular, and osseous systems, gun-shot wounds and amputations, with a full general index.

The ripe experience that Mr. Bryant brings to this work has enabled him to cull judiciously from the opinions and doings of others, and yet, his own views, derived from a large practice, are definitely and decidedly emphasized. We very early find illustrations of this, p. 20: "Disease in subjects who have these diatheses (strumous, scrofulous, tuberculous), is precisely identical in its essential nature, with the same disease as found in others who have them not. It may be modified in its course by the diathesis, but it is the same. These names (scrofula, etc.), have, likewise no special signification when applied to local affections. It is important to bear this fact in mind for

there can be little doubt that the expressions, strumous disease and scrofulous disease have had an injurious influence on the practice of surgery. They have too often led the surgeon (and misled the public to regard a local affection in a strumous or scrofulous subject as incurable, as depending on some constitutional condition, and not on a local cause. In disease of the joints this error has been much felt and should be rejected."

* * * * "Let it once be shown that local disease has a direct influence in producing constitutional dyscrasia—call it by what name we will—and the necessity of dealing actively with chronic local affections becomes a duty. I have occasionally acted upon this principle with the best results, and in more than one case in which there was progressive lung mischief associated with a disorganized knee, have found the lung affection speedily subside, after amputation. It must likewise be admitted, that a local disease in a strumous subject, may be as amenable to treatment as it is in a more healthy one. The treatment, may indeed require some modification from the fact of its occurring in such a subject, but the principles of practice in both, the strumous and the non-strumous are the same, although we know that in the former all diseased action is of a low type, and that there is always a greater tendency to degenerative changes than we find in other subjects."

Some of these views are at variance with certain high authority in this country, but we believe they are correct, and wish they might be more generally accepted.

The processes of repair and inflammation are briefly, but sufficiently dwelt upon, Simon and Paget being closely followed. Mr. Bryant, on the subject of syphilis is a dualist; asserts there is no specific for the disease; doubts whether it is ever really cured, and claims that while a large number of cases appear to be cured, yet after the lapse of years, under some weakening influence by which the powers of the patient are reduced, the existence of former syphilis is again recognized. So long as the powers of the subject remained good, no evidence existed of its presence. Nature, unassisted by art, is incapable of eliminating or arresting the disease. The power of mercury in getting rid of the symptons is indisputable.

Among the different modes of employing it, he says for six years he has been using mercurial suppositories twice a day,

and has been greatly satisfied with its action; it acts as well this way as by the mouth, and does not interfere with digestion or the functions of the abdominal viscera. He is disposed to think it by far the best mode of administering mercury, and knows of no objection to its use.

The treatment of cancers is summarized as follows:

"(I). Cancerous tumors should be excised when practicable, and the sooner the operation is performed after the diagnosis is clear the better.

"(II). Open cancerous tumors, as a rule should be treated by caustics, the best being those which contain chloride of zinc, or by enucleation.

"(III). For skin cancers, caustics are, as a rule, the most available, although excision in some instances, as in the lip, is to be preferred. The galvanic cautery, however, should be employed when possible, it being the most rapid and efficient destructive agent we possess."

"No medicine has any special influence on the disease." Some gentlemen in this country would differ from our author, Dr. Washington. L. Atlee, of Pa., believed that arsenic, liq. potass. arsen. gtts. iii, *ter die*, had a protective influence, and extinguished the cancer cell. *Trans. Am. Med. Assn.* vol. 23, page 502.

A most excellent chapter is given by Dr. Moxon, on the microscopical anatomy of tumors.

Mr. B. is in favor of *early* tracheotomy in cases requiring it.

In *hydrothorax* he taps the chest with trocar and canula[1] and aspirator; in *emphysema* he makes a free opening into the thorax with scalpel or large trocar and canula, no pent-up air being allowed, and daily washing of the cavity. Believes in lithotrity, but fails to give the latest improvement by Bigelow, of Boston.

Of stricture of the urethra: "The plan of treatment by *dilation*, which I have laid down, is absolutely safe, and is never followed by a fatal result, but this can not be said after the splitting of the stricture." In accordance with which our own experience and observation emphatically agree.

To show how nearly this edition has been brought down to the present time, and how familiar with the advanced surgery of to-day, and how willing to adopt it Mr. Bryant is, we would

1 Complimentarily referring to Dr. Bowditch, of Boston, as being a staunch supporter of, but not as being the originator of the operation.

refer to a case of congenital talipes varus, in a boy *æt.* 12, on whom he operated June, 18, 1878, by "removing a wedged-shape piece from the tarsal bones, Mr. Davies Colley's operation. He can now, November 10, 1878, walk fairly well, with his foot as flat on the ground as the unaffected one."

Dislocations are largely reduced by manipulation, credit being given to the American method.

Though the chapter on fractures is pretty full and practical, yet there are many facts, especially in the matter of treatment, which we in this country believe and practice, that Mr. Bryant is ignorant of or ignores. He imparts good advice in regard to the treatment of fractures of the neck of the thigh-bone, p. 798, to the effect that the limb must be very gently, if at all, handled, lest the impaction or ligaments be broken, *i. e.*, lest the relation of the fractured parts be disturbed.

The book contains an account of the new things, such as skin grafting and the Plaster-of-Paris jacket in Pott's disease. Speaks not, however, enthusiastically, of division or excision of nerves. Does not mention nerve stretching. Goes fully into diseases, and injuries of the eye and of the ear. Illustrates the artery constrictor of Speis of Brooklyn. Of transfusion, (but not of the intravenous injection of milk), the galvanic cautery in the treatment of nævus. In varicose veins speaks of pressure with a bandage of Dommett's or elastic tissue. (We do not know whether reference is had to the pure rubber bandage which has found such popularity in this country within the past few years or not, but if not, it is certainly an omission.) The syphilitic teeth of Hutchinson are well illustrated. In acute intestinal obstructions, our author is in favor of prompt laparotomy, (for which term he gives credit to Dr. Ashurst of Philadelphia); chapter on Hernia, is very full and complete.

Twenty-one pages are devoted to dental surgery, by Mr. Moore, which might well have been omitted in a "Manual on Surgery," as dentistry is so eminently an art by itself.

Mr. Bryant is certainly an able surgeon, with a large experience, and has given the profession one of the best works in his department to be found in the language.

We would suggest to our publishers that their next edition have an American editor to supply many omissions with which we, on this side the water, are more or less familiar, and which would largely enhance the completeness of the work. A. J. S.

HABITUAL DRUNKENNESS AND INSANE DRUNKARDS—By JNO. CHS. BUCKNILL M. D., London, F. R. S., Fellow of the Royal College of Physicians. Late Lord Chancellor's Visitor of Lunatics.

Dr. Bucknill has bestowed a lasting obligation upon the profession by the masterly manner in which he has handled this subject. In a theoretical as well as practical sense, his conclusions are as logical as they are philosophical. The result of his observations during his trip to the inebriate asylums of the United States, confirms his previous opinions as to the failure of these institutions in a curative point of view.

The author fearlessly deals a heavy blow at the underlying system which keeps alive these inebriate asylums when he attests that, "The overt-acts of the drunkard ought to be punished in such a way as to make them a real warning, and especially the act of public drunkenness, which is a kind of indecent exposure; also failure through drunkenness to maintain children, and indeed, all drunken conduct which invades the rights of others; and there can be no just reason why the punishment for such acts should not be accumulative. It is unreasonable that magistrates should have to commit the same person from fifty to a hundred times for a constantly repeated offence, and the remedy would appear to be a *penitentiary* for habitual drunkard offenders, in which they should be compelled to earn their maintenance, and from which they should be released *on trial*, and live for a time under the surveillance of the police." "Until some evidence has been procured that adult drunkards are capable of being reformed, all public moneys expended on *reformatories* ought to be devoted to the reformation of the young, whose vices and crimes are to so great an extent the effect of parental intemperance."

In another place our author states that: "My own impressions of the inebriate asylums of America—and I visited six of them—are most unfavorable." "I believe the treatment of habitual drunkards for the cure of their supposed disease, to be unsound from top to bottom and everywhere."

No physician can afford to be without this work. It is admirably written, and the well-known reputation of the author as a writer and profound thinker, entitles his opinion to the greatest respect. Its perusal will also attract and instruct the non-professional public, especially the heads of families, whose responsibility is so great in these days, when the crime of in-

temperance is making such fearful strides and producing such combinations of physical and moral disasters.

The experience of the reviewer of this book, who for nearly fifteen years, has had the constant, daily professional charge of inebriates, is fully in accord with that of Dr. Bucknill. Taking a retrospective view of his labors in this direction, he can with difficulty, re-call a single instance in which restoration was permanent. J. K. B.

LECTURES ON LOCALIZATION IN DISEASES OF THE BRAIN—By J. M. Charcot—Edited by Bourneville—Translated by Edward P. Fowler. M. D. New York, *Wm. Wood & Co.*, 1878.

The author in his preface, states: "I have selected, as occasion required, information furnished by normal anatomy, experimental physiology and clinical observations, illustrated by minute and methodical examination of organic lesions." "I have always given precedence, however, to the last mentioned order of testimony, convinced that, although normal anatomy and experimental physiology may serve to indicate the true direction; still, clinical and pathological research is necessary (in case of a human subject) to a final judgment and to the *furnishing of proof*." Prof. Charcot has well accomplished his task, as, indeed, he always does in all the labors he undertakes in the neurological field of inquiry, in which he has already won so many laurels. The work before us offers ample evidence of patient study, originality of thought and indefatigable power of observation and analysis. It is impossible to over-estimate the practical value of this most interesting and able monograph. All physicians interested in anatomical study—all physiologists, and more particularly, all clinicians, especially teachers, will find Prof. Charcot's book on "Localization in Diseases of the Brain," quite indispensable.

Among many other important matters, he most clearly explains, with the assistance of excellent illustrations, the anatomical relations of, and the physiological and pathological conditions affecting the *internal capsule*, the *nucleus caudatus* and the *lenticulares glandulæ*. It would be impossible to exaggerate the importance of a thorough comprehension of this subject at the present day. This statement will not be a source of astonishment now that the writings and teachings of Professor Charcot are riveting the attention of the entire medical world, and attracting all students to investigate the phenomena of cerebral

hemianæsthesia depending upon *lesions* restricted to well-known anatomical districts, and also *hemianæsthesia*, complicating hysterical affections and superinduced by *functional* nutritive disturbances of the aforesaid nervous tracts. These lectures, in a most attractive manner, make the study of this and allied subjects easy and fascinating. The lectures on the "Parallel between spinal and cerebral lesions," the "Arterial circulation in the brain," and on "Central arteries, isolated lesions of the gray ganglia," we would find it impossible too highly to commend. We would particularly insist that not the neurologist exclusively, but all practitioners of medicine without exception, who have the ambition to keep abreast of medical progress, cannot possibly afford to overlook the very valuable and practical contributions contained within these most instructive lectures. The name of the highly distinguished author is alone a sufficient gurrantee of their scientific value and originality.

J. K. B.

THE DISEASES OF LIVE STOCK and their most efficient remedies, including Horses, Cattle, Sheep and Swine, being a proper treatise, giving in brief and plain language, a desceiption of all the usual diseases to which these animals are liable, and the most successful treatment of American, English and European veterinarians. By Lloyd V. Tellor, M.D., Philadelphia. *D. G. Binton*, 1879.

To one accustomed to the older books on Veterinary Surgery, the contents of this book will be a matter of surprise.

We are struck with the fact that the principles of physiology and anatomy have at last been recognized in the treatment of diseases of animals.

The horse doctor has long been distrusted as a person of doubtful capabilities, and we have often preferred to leave a sick favorite to the care of nature rather than entrust him to such barbarous hands. In matters of lameness, an honest blacksmith has been our chosen adviser, rather than a professional veterinary surgeon. Empirics and quacks are now, however, giving place to educated men, and we find the practice of veterinary medicine pursued in a scientific manner.

This book is not by a professional veterinary surgeon, but as the author tells us in his preface, it is written by a country doctor, "who has been brought up on a farm, and being often consulted about the diseases of animals, has read the best works on the subject." He applies the principles and practice of medicine

to animals, and gives us an epitome of the best writers, both English and American, on veterinary surgery.

The book is well written, and as the author states, "it is in language free from technicalities, and is directly adapted to the the use of the farmer and stock grower." It is divided into four parts.

The first, devoted to the principles of veterinary medicine, the second to diseases of the horse.

Third, to diseases of the cow, sheep and swine; the fourth to hygiene and medicine.

The different diseases are concisely and accurately described, the symptoms being clearly defined, that they may be readily recognized by the non-professional. The chapter on diseases of the foot, and on lameness will be especially instructive to a doctor, whose interests are so closely connected with the sound condition of the limbs of his horse. We are glad to see that conservative views of treatment have at last found favor in the treatment of animals—that the searing iron, the lancet and the seton, together with heroic and universal doses of aloes, tartar-emetic and lobelia have at last given place to more rational medicine.

The book is well printed and bound, and we heartily commend it to all who value the comfort and well-being of their animals, especially those who are beyond the reach of a good veterinary surgeon. W. C. G.

CHEMISTRY: General, Medical and Pharmaceutical. By JOHN ATTFIELD, M.D., Ph.D. Eighth ed. H. C. Lea, Philadelphia, 1879. 12mo. 697 pp.

Since this work appeared, in 1867, as an *Introduction to Pharmaceutical Chemistry*, it has steadily grown in public favor, and in size, gradually enlarging the scope of its teaching, so that at present it forms a respectable *Manual* for *medical* and *general chemistry* as well as for *pharmaceutical*. In its plan of teaching it differs materially from other works in happily combining practical and theoretical lessons in such a lucid manner that it may be used, even without a teacher, for accomplishing a degree of familiarity with chemistry and its useful applications.

Another merit of the work that does not appear to have been sufficiently noticed, is, that, though written in England, its able author has, himself, taken the pains of embodying the preparations of the *U. S. Pharmacopœia* into the *text*, not giving them only a short marginal notice, as is the custom of other foreign

works. Thus it is in reality a work *written for an American public*, not one that has been (as an after-thought) adapted by an American editor.

It is to be regretted that the course of teaching in many of our medical and Pharmaceutical Colleges treats chemistry too much as a step-child to whom time is but grudgingly spared. Hence many students do not acquire a sufficient familiarity with that noble science, to overcome the repugnance that a superficial study is so likely to engender, where a closer acquaintance would prove so attractive. To such as have, in their college days, had insufficient opportunities, a better book can hardly be offered to improve their knowledge of chemistry.

While this last (eighth) edition has been enlarged by the addition of about thirty pages and some useful tables, the price has been reduced materially.

We hope that the author and publishers will be gratified by having to issue the *ninth* edition in less than two years hence.

C.

LECTURE NOTES ON CHEMICAL PHYSIOLOGY AND PATHOLOGY. BY VICTOR C. VAUGHAN, M. D. PH. D., Lecturer on Medical Chemistry, in the University of Michigan, &c. Second edition revised and enlarged. Ann Harbor, 1879. 8 vo. pp. 315.

The sources from which this book is collated, are both excellent and recent; hence it contains much excellent matter, and there need be no doubt that to the author's immediate pupils it is a most useful book. But our praise must end here. We did not find access to the first edition; if this deserved the name of "lecture notes," we can't help thinking that it must have been the better of the two editions. Much of the awkwardness of the present issue appears to be due to the enlargements. The title is not well chosen; the book treats of so-called physiological and pathological chemistry, and it is hardly fair to criticise it by its actual title; for its physiology and pathology are meagre and cloudy, where as its chemistry is good. The facts of animal chemistry are correctly stated, very complete, and rest on good authority; but they are badly arranged, and marred by infelicitious expression.

Thus, when about to describe how vomited matter may be ascertained to have digestive power, (contain gastric juice,) or not, the author says: "For diagnostic purposes, the physician often desires to know whether *the gastric juice, as obtained from*

vomited matter, is capable of performing its physiological duties."

Here and there we meet with strange redundancies, such as the excursus on the occurrence of phosphorus in nature under the head of "Phosphates" in the urine.

The more especially physiological and pathological portions of the book however, are very confused. Can anything be more cloudy than the paragraph headed "Physiology," (if the albumen in the urine)? or anything more confusing to a student than the desultory, chopped sentences on nutrition and animal statics scattered all over the work.

The whole make-up of the book, the inequality of treatment, the monotony of headings of unequal value, the omission of a table of contents, the pathetic introduction of a paragraph "Literature"—of two lines!—under "Pathology of the urine,—goes to show the inexperience in book-making of both author and printer.

G. B.

BOOKS RECEIVED.

A guide to the qualitative and quantitative analysis of urine, designed for Physicians, Chemists and Pharmacists. By Drs. S. C. Neubauer and J. Vogel; with preface by Prof. Dr. R. Fresenius, translated from the seventh German edition, by E. C. Cutter, M. D.; revised by Edward S. Wood, M. D., Professor of Chemistry, in the Medical School of Harvard University. *New York: Wm. Wood & Co.*; 1879; 8 vo. pp. xiv—551, with wood cuts and colored lithographs, strongly bound in calf.

A practical treatise on surgical diagnosis; designed as a manual for practitioners and students. By Ambrose L. Ranney, A. M., M. D., adjunct Professor of Anatomy, and lecturer on Minor Surgery in the Medical Department of the University of New York: *New York, Wm. Wood & Co.* 1879. 8 vo., pp. xii —386. Cloth.

Spermatorrhœa: Its causes, symptoms, results and treatment. By Roberts Bartholow, A. M., M.D., Professor of Materia Medica Jefferson Medical College, Philadelphia. Fourth edition, revised. *New York: Wm. Wood & Co.:* 1879. 12 mo., cloth, pp. viii—128.

Diseases of the abdomen, comprising those of the stomach and other parts of the alimentary canal, Œsophagus, Cæcum, Intestines and Peritoneum. By S. O. Habershon, M. D., Lond. F. R. C. P., etc., with illustrations. Second American, from the third enlarged and revised English edition. *Philadelphia: Henry C. Lea*, 1879. 8 vo., pp. 554. Cloth.

Memorial address of the life, character and death of Dr. John L. Cook, of Henderson, Ky. By J. W. Singleton, M. D., of Paducah, Ky. A paper read before the McDowell Medical Society.

Opium as a tonic and alterative, and its hypodermic use in the debility and amaurosis, sometimes consequent upon onanism. By B. A. Pope, M. D. A paper read before the New Orleans Medical Society.

Report of the Progress of Surgery, for 1878, read by S. Egan, M. D., before the Texas State Medical Association, Sherman, 1879.

Report of the state of the New York Hospital and Bloomingdale Asylum, for the year 1878.

OBITUARY.

Dr. Isaac Hayes, of Philadelphia, editor of the *Am. Journal of Medical Sciences* for fifty-two years, has, at a ripe age, and after a useful life, passed from the scene of his labors. His son has for some years been associated with him in the editorial duties, so that the journal, the oldest and one of the best, will still continue. Dr. Hayes "contributed largely to the creation and diffusion of a sound and healthful medical literature, and thus made himself, in an enviable degree, an instructor and benefactor of his profession."

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Stated Meeting, December 7, 1878. Dr. S. G. Moses, President, in the Chair.

Coccyodynia.—*By T. L. Papin, M. D.*

Attached to the coccyx are the greater and lesser sacro-sciatic ligaments, the ischio-coccygeal muscles, the sphincter ani, the levatores ani, and some fibres of the glutei muscles. In locomotion, and more especially in the act of rising and sitting, each and every one of these ligaments and muscles are brought into action, and a consequent motion of the coccygeal bones occurs, first forwards and then backwards as the muscles are again allowed to be at rest.

Sometimes a neuralgia, sometimes a caries of one or more of these little bones, or again a fracture or dislocation occurs, and any of these may produce intense pain during the contraction of the muscles and ligaments, the pain disappearing entirely when the parts are at rest.

Dr. Nott first described this painful affection in 1844. Accurate and complete as his account is, both as to the pathology and treatment; it was not until 1861 that Simpson, in Scotland, and Scanzoni, in Germany, again called the attention of the profession to this disease.

Definition.—Excruciating pain, excited by the least contraction of the muscles attached to the coccyx. As this is necessarily frequent, almost constant indeed, the patient may be said to suffer at all times, except when completely at rest.

Causes.—Blows and falls on the coccyx, resulting in fracture or dislocation of the bones, or merely injury of the muscles and ligaments; or, injuries to these occuring during parturition, the effects of cold, exposure, etc. An hysterical pain, referred to the coccyx, may so closely simulate true coccyodynia as to baffle, for some time, a correct diagnosis.

I have had one such case, in which I operated before discovering the true pathological status. In that case, I detached

all the muscular and ligamentary attachments, with no benefit to the patient. I concluded the bones, possibly, were diseased; and, whilst making a more careful and thorough examination, my patient did me the honor to go into the most violent hysterical gyrations, which were anything but funny at the time, but which gave me an insight into the real cause of the pain in the coccyx. She had overheard me speak of the affection to my class, and concluded she might as well have coccyodynia as anybody else. And she had it badly, and actually told me all about a kick her husband gave her months before, and actually submitted to the operation of having her coccyx neatly carved. I need not add that assafœtida, valerian, comp. sulph. ether, iron and bitter tonics were freely administered in this case, instead of resorting to the more heroic operation of removing the entire coccyx.

Treatment.—Without entering into details of the medical treatment, of which the best that can be said, is, that it is palliative, and only palliative, I will describe succinctly the two surgical operations for the cure of this very painful affection.

1st. When the neuralgic affection is solely confined to the muscles and ligaments, the sub-cutaneous detachment of all these is sufficient to give immediate, complete, and permanent relief.

2d. Should the disease have its origin in the coccyx itself, the bones being dislocated, fractured or carious, then the small bones, or so many of them as are implicated, should be removed.

Of the first operation—the sub-cutaneous detachment of the muscles and ligaments, Thomas says: "I have resorted to this procedure but once, when I found it exceedingly difficult of accomplishment, and it proved an entire failure in giving relief." I am a little surprised, that so clever an operator as Thomas, and one so full of resources, should be obliged to make such a confession.

I have operated six times sub-cutaneously, and found no real difficulty. Indeed, I look upon it as one of the easy surgical operations. The method I adopt, is to place the woman in the right semiprone position, introduce the index finger of the left hand into the rectum, press it back forcibly, so as to render the coccyx and its attached muscles and ligaments tense; then, with an ordinary sharp-pointed tenotome, I penetrate the skin a line or two above the extremity of the coccyx and back of it, press my knife through the soft tissues, up to the connection with the sacrum, then, turning the blade for-

ward toward my left index finger, I detach the ligaments and muscles along the lower margin of the coccyx. This operation is repeated along the upper margin of the coccyx, and before withdrawing the knife, its point is carried around the lower extremity, and the levator ani detached the last thing. The hemorrhage from the operation does not amount to more than a few drops of blood.

Two of the cases I have operated upon I think worth reporting, the first being a case of coccyodynia simplex, a neuralgia of the coccyx; the second, complicated with a fissure in ano, which caused so much pain as to completely mask the neuralgia of the coccyx. The first case, the young wife of a physician, consulted me about eight years ago. I need not detail the symptoms. She had an undoubted rheumatic neuralgia of the coccyx. I operated at 11 A. M., and the same afternoon I met her on Grand Avenue, buggy-riding with her husband. She recovered entirely, without back-set.

The second case presented itself at my Clinic, at St. John's Hospital, six weeks ago. She complained only of the severe symptoms indicating fissure-in-ano. A little chloroform and a complete laceration of the sphincter relieved her of the fissure, but to my horror she complained, two days afterwards, of a new series of painful symptoms, a perfect case of coccyodynia. Again I resorted to chloroform, and operated after the method described above, and in less than a week after she came under my care, I was enabled to send her back home, cured of two pests that had baffled four or five doctors for the last three years.

Stated Meeting, March 27, 1879. Dr. S. G. Moses, President, in the Chair.

Discussion of Dr. Papin's *Paper on Coccyodynia.*

Dr. Ford: I think the matter of coccyodynia is an important one. I am not satisfied that it takes its origin in blows upon the coccyx, although that is often the alleged cause. You often hear a history of the patient falling athwart something, and receiving an injury to the coccyx in consequence; one will say she fell whilst dancing; another that she was thrown forward while mounting a horse, and so on. But I am inclined to think it is closely associated with anteversion more than with retroversion of the uterus, with anteversion and anteflexion; in consequence of the derangement of the circulation of the uterus,

which of course takes place by the flexion, both fundus and cervix become large, and the neck falls backwards while the fundus falls forwards, the neck therefore pressing against the rectum, irritating the nerves of the rectum, and probably of the coccyx itself. As an associated affection, I think in my observation there is, decidedly, a connection between anteversion, with flexion of long standing, and coccyodynia; and by relieving the version, and of course the flexion, by the proper methods, the coccyodynia will often undergo a spontaneous cure. The operative measures are—either circumsection or excision. I have never practiced excision. In several cases I have cut around the coccyx with the knife, placing the patient on the left side. Dr. Papin says he places them on the right side; I do not think there is any advantage in that. I have succeeded in several cases without any great difficulty, although I will say, it is a decidedly difficult little operation. It is also a very painful one. The circumduction of the knife, together with such measures as will restore the uterus and keep it in its place, will be sufficient. In a case or two, I have tried long continued cauterization and cantharidal collodion painted over the coccyx, at the same time paying more particular attention to the uterine displacements; and those patients have done just as well in the long run as the ones in which I have passed the knife around the coccyx. But in those cases where there has evidently been a fracture, with destruction of one or more of the terminal bones of the coccyx, it may be well perhaps, to take out one or two of these bones. I do not know how we could otherwise rectify the condition. The effect upon the sympathetic economy is of course very marked; but I think it is more to be attributed to the associated uterine disorder.

Dr. Boisliniere: I have seen some cases and relieved them with hypodermic injections of morphia, repeated as occasion required—one-fourth grain every day or two. When anchylosis of the coccyx takes place, there is nothing to do except to remove by excision, for fear that in labor this might prove a serious cause of arrest of the head of the child. It is a frequent cause of the application of the forceps; when the child's head has descended to the floor of the pelvis it will be suddenly arrested, hooked on this projection, and will not proceed any further until the efforts of nature fracture the coccyx. I have never waited to hear that sound. I have always applied the forceps to those cases, changing the diameter of the child's head, and have generally been able in this way to clear the obstacle. That is the only point in connection with this accident that I can see is of special interest to the obstetrician. I believe

it is generally the result of a fall; little girls playing in a swing, may receive an injury of this kind that may remain for life. I have never had occasion to perform the operation of sub-cutaneous section. I have always relieved those cases of a neuralgic character, by injection of morphine.

Dr. Barrett: My experience with reference to the frequency of this affection is rather different from Dr. Ford's, or else I have failed to recognize the trouble; and if I have so failed, it has certainly not been because I have not looked for it, because I have been industrious in searching for such cases a number of years; and a short time since one came under my notice, presenting all the typical signs and symptoms. I attempted sub-cutaneous division of the muscles and tendons of the coccyx, and thought I did it thoroughly at the time; but the operation did not benefit the patient in the least, and so typical was the case that I determined, after the failure of the sub-cutaneous operation, to excise the coccyx; that I did about three weeks ago, and that operation evidenced to me that sub-cutaneous division is a matter of no small difficulty. It is a most difficult thing to dissect out the coccyx. In this case, after the extraction of the bone, there was no disease, no pathological condition that could be detected in its textures; what the result of the operation will be, I cannot yet report. The patient is still confined to bed and the wound is not healed. It is a very severe operation; this patient has been confined to bed I think, three weeks; she has had a great deal of suffering indeed, and I presume it will be yet a week or ten days before she is able to get up, and when she does, she will be very much prostrated by the operation. Certainly, if this operation is not beneficial to this patient I shall not be tempted to try it again.

Dr. G. A. Moses: What was the position of the uterus?

Dr. Barret: The uterus in this case was retroverted and somewhat flexed. Externally the os is exceedingly narrow, and the uterus is bound down in its false position by a pelvic peritonitis, being absolutely immovable.

Dr. Prewitt: Did you find that the knife had not severed the attachments to the coccyx?

Dr. Barrett: I could not tell that.

Dr. Prewitt: How much of the bone did you take out?

Dr. Barrett: About three-fourths of it.

Dr. Prewitt: I will only say that I have never met with a case of the kind that I thought required an operation. I was a little surprised at Dr. Papin's paper, in regard to the expression of the facility with which the thing could be done, because I am satisfied this is not the case. He mentioned one case in which

he operated in the forenoon, and in the afternoon he saw the lady out, riding in a buggy with her husband, so little was the discomfort from it.

Dr. Ford: Dr. Papin's case was one of simply passing the knife around—it was not an excision.

Dr. Gehrung: I have met with a small number of cases of this disease. According to my experience they did not particularly depend on any special kind of displacement. I have had some cases with retroversion, others with anteversion, and others during pregnancy, even advanced pregnancy, where the pain lasted for a long time; and in all the cases that came under my observation, a history of blows or falls had also been given; and it seems to me rather probable that where there is uterine displacement, or uterine or pelvic disease of any kind, in combination with a fall or blow, disturbing the healthy nutrition of the injured point, and pre-disposing it to nervous phenomena, that the reflex pain will fall with preference upon the thus weakened parts. On the other hand, I should rather look to retroversion, retroflexion, and anteflected retroversion, to produce such difficulties, than to anteversion, as these malpositions are much more apt to compress the pelvic nerves, thereby causing reflex actions. I have not had any experience in severe cases that needed operative interference, but I have succeeded very well by the use of the fly blister, simply brushing occasionally the cantharidal collodion on the region of the coccyx, and repeating it when the blisters dried up. With a few such applications I have always succeeded in curing the case.

Dr. G. A. Moses: It seems to me that the various operative procedures which have been recommended for this, at times, extremely painful condition, depend very frequently for their success upon the cause of the pain, which, undoubtedly, may be due to a variety of conditions. It may arise, for instance, from fissures of the anus, the sphincter ani being inserted into the point of the coccyx; these, under certain circumstances, sometimes produce the most intense pain, and with relief of the pathological condition, we relieve the coccyodynia. But, without the presence of fissure, frequently these pains are only experienced during defecation—there seems to be a neuropathic condition of the muscles, either of the levator ani, or the sphincter, and any division which includes these attachments, will ordinarily relieve. We may have neuralgias of any of the muscles attached to this bone, either of one, or of both sides symetrically, and it is under those circumstances that the sub-cutaneous division is successful. If, by chance, the knife does not succeed in reaching the affected muscle, then the at-

tempt will be a failure. In addition to this, there may be a disease of the bone itself, as has frequently been observed, which, of course, no division of the bone from its attachments would relieve; under these circumstances, excision is the only relief, unless it be time; and even in the most severe cases, time will often bring relief. But, when the case is so severe that time threatens to be tardy, operative interference becomes necessary. I believe it was Simpson who first suggested sub-cutaneous division of the attachments. He relates a case in which he broke the blade of his knife, before he had completed the section; he withdrew the stump, and told the lady he had broken his knife within the wound. The patient jumped from the table, and said, "Never mind the knife—the pain is gone." He cited the case afterwards as showing that a portion of metal may remain in the living tissues a long time without giving rise to trouble. In this case, he evidently succeeded in relieving the tension of the part which produced the pain. Fifteen years previously, Dr. Nott had excised the coccyx. He wrote a paper on it in 1868, in the first volume of the *American Obstetrical Journal*, in which he gives the details of cases, and his reasons for adopting that operation under certain circumstances. The gentlemen are right with regard to the difficulty of performing sub-cutaneous division. Where it does fail, I think it fails from the reasons I have stated; either from failure in dividing the muscle which is subject to the neuralgic condition, or, from disease within the bone itself. It has also been thought that it was a purely nervous affection, arising from an inflammatory condition of the glandula coccygea, which is connected with the ganglion impar by a branch of the sympathetic, and that in excision of the bone, unless the bone very closely adheres to the gland, the filaments connecting the gland with the ganglion will be divided. Notwithstanding uterine displacements produce a large variety of reflex pains, I cannot think this would be a very frequent cause of the peculiar pain existing in coccyodynia. It is not uncommon to find a certain amount of pain in the extremity of the coccyx in many uterine abnormalities; but I should think if it were due to this condition, that we should meet it much more frequently than we do. The pain must be very ephemeral, or of superficial character, that could have been relieved by the several expedients referred to, of medication or topical application, otherwise they certainly could not have been relieved by the measures adopted. In cases of severity, which are prolonged in character, occasioning intense pain in rising, or in the act of defecation, some

surgical interference is almost essential. Without it, relief would scarcely ever be obtained.

Dr. Gehrung: I wish merely to state, that some of those cases I mentioned, were of long duration, and the patients were for months unable to rise, or sit down, unassisted.

Dr. Ford: The cases I mentioned, were all of intense character. The patient was not able to sit down at all, except on one haunch, and any attempt at walking was accompanied by intense pain. In one of the cases, it was attributed to a fall from a saddle; in another, to a fall across a heater whilst dancing. In three cases, it came on in connection with uterine trouble. In my experience, I have found it rather frequent, much more frequent than I expected.

Dr. Coles: I think the popularization of the operation in this country, is greatly due to a paper by Dr. Nott, read before the Obstetrical Society in the State of New York. In that Society, it is customary for every new member to bring forward some specimen and present it to the Society, and Dr. Nott exhibited the bones of a case he had operated on. It was a rare and interesting case of course, then, and I think he was the first to perform the operation; and in that case there was reason to believe that all the ordinary causes might be very well eliminated. The bone was diseased, there was cystic expansion, either of the terminal joint, or the one next to the terminal joint, which was plainly to be seen in the specimen. So that, in that case, the probabilities are, if that cystic expansion of the bone had anything to do with the pain, that no other procedure than evulsion of the bone would have cured it.

MORTALITY TABLE.

CITIES.	ESTIMATED POPULATION.	DEATHS DURING THE PAST MONTH.	DEATH RATE PER 1000 LIVING.	
			FOR PAST MONTH.	FOR PAST YEAR.
New York	1,095,365			23.42
Philadelphia	901,380	1.159	17.00	24.93
Brooklyn	564,448	863	19.90	20.15
St. Louis	500.000	423	11.00	12.00
Chicago	460.000	645	14.00	16.50
Boston	375.476	557	20.50	20. 72
Cincinnati	280,000	419	19.48	17.22
New Orleans	210,000	351	21.73	

ANNOUNCEMENTS FOR THE MONTH.

HOSPITALS.

CITY HOSPITAL, corner Linn street and Lafayette avenue—D. V. Dean, M. D., Superintendent in charge. *Clinical Lectures.*—MONDAYS, A. M., 9 to 10, Prof. Robinson, medical; 10 to 11, Prof. Lankford, surgical; 11 to 12, Prof. Michel, eye. WEDNESDAYS, P. M., 3 to 5, Prof. Smith, medical; 4 to 5, Prof. Hodgen, surgical, and Dr. J. Green, eye. THURSDAYS, A. M., 9 to 10, Prof. Bauduy, nervous system; 10 to 11, Prof. Lankford; 11 to 12, Prof. Michel. SATURDAYS, same as Wednesdays.

ST. LOUIS MULLANPHY HOSPITAL, corner Grand avenue and Montgomery street—In charge of the Sisters of Charity. *Clinical Lectures.*—TUESDAYS, A. M., 9 to 10. Dr. Pollak, eye, and Dr. G. A. Moses, diseases of children; 10 to 11, Prof. Gregory, (and Dr. Carson,) surgical; 11 to 12, Prof. Boisliniere, (and Dr. Moses,) diseases of females; 12 to 1. Dr. Glasgow, diseases of throat and chest, (and Dr. McCabe, medical). SATURDAYS, same as Tuesdays.

ST. JOHN'S HOSPITAL, corner Twenty-third and Morgan Sts. —Conducted by Sisters of Mercy. *Clinical Lectures.*—MONDAYS, A.M., 10 to 11, Dr. (Prof. Adj't.) Shaw, medical; 11 to 12, Prof. Prewitt, surgical; P. M., 2 to 3, Prof. Todd, diseases of the ear and throat, and Prof. Kingsley, diseases of children; 3 to 4, Prof. Papin, diseases of women. TUESDAYS, A. M., 10 to 11, Dr. Shaw, medical; 11 to 12, Prof. Prewitt, surgical, and Prof. Michel, diseases of the eye; P. M., 2 to 3, Prof. Kingsley; 3 to 4, Prof. Papin. WEDNESDAYS, A. M. 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Todd. THURSDAYS, A. M., 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Kingsley; 3 to 4, Prof. Papin. FRIDAY, A. M., 10 to 11, Dr. Shaw; 11 to 12, Profs. Prewitt and Michel; P. M., 2 to 3, Prof. Todd; 3 to 4, Prof. Papin. SATURDAYS, A. M., 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Kingsley.

ST. LUKE'S HOSPITAL, Tenth and St. Charles streets—*Episcopalian.—Clinics—Dispensary.*—MONDAYS, P. M., 2 to 3, Dr. J. Green, diseases of the eye and ear, and Dr. Wm. Porter, diseases of the throat and lungs; 3 to 4, Dr. Barret, diseases of women. TUESDAYS, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel, diseases of children. WEDNESDAY, P. M., 2 to 3, Dr. Green. THURSDAY, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel. FRIDAYS, P. M., 1 to 3, Drs. Green and Porter; 3 to 4, Dr. Barret. SATURDAYS, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel.

U. S. MARINE HOSPITAL, Marine Avenue, near Carondelet Avenue.—DR. WALTER WYMAN, surgeon in charge.—*Clinics*, daily. Physicians and medical students invited.

ALEXIAN BROTHERS' HOSPITAL, Corner Jefferson Avenue and Osage Street.—*Clinics.*—Daily, at 10 A. M., Dr. Wesseler, medical, and Dr. Lutz, surgical.

INFIRMARIES.

ST. MARY'S INFIRMARY, 1536 Papin street, under the charge of Sisters of St. Mary.—*Clinics.*—Daily, A. M., 9 to 10., Dr. Yarnall, diseases of women and children; 10 to 11, Dr. Holland, general and orthopedic surgery; 11 to 12, Dr. Hypes, medical. MONDAYS, WEDNESDAYS and FRIDAYS, 12 to 1, Drs. Gebser and Frazier, diseases of the eye and ear; 4 to 5, Dr. Stuever, diseases of the throat; TUESDAYS, THURSDAYS and SATURDAYS, P. M., 1 to 2, Dr. Hardaway, diseases of the skin.

MISSOURI EYE AND EAR INFIRMARY, 109 N. Eighth street—*Clinics.*—Daily, P. M., 1½ to 3, Drs. Gebser and Frazier, diseases of the eye and ear.

SOCIETIES.

ST. LOUIS MEDICAL SOCIETY, Polytechnic Building, corner Seventh and Chestnut streets, meets Saturdays, from 8 to 10 p. m. Papers are read, morbid specimens exhibited, cases related, and discussions had.

MEDICO-CHIRURGICAL SOCIETY, 1615 Washington Avenue, meets on the second and fourth Mondays, May 12 and 26, from 8 to 10 p. m. Morbid specimens, cases and discussions.

ST. LOUIS OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY meets Thursday, April 17th, at 8 p. m., at Dr. C. L. Boisliniere's, 2301 Chestnut Street.

NOTICES.

APPROACHING GATHERINGS.—Before our next issue, many public gatherings, important to the profession, will have taken place. The American Medical Association, now in its thirtieth year of successful and increasing usefulness, will gather into its sessions at Atlanta, Ga., May 6th, from all parts of our nation, delegates, who we trust will contribute much to our stock of positive knowledge, and exert an influence in the direction of even a yet higher *morale* than the profession now enjoys. The Missouri State Medical Association will meet in Columbia, on the 20th of May; much earnest work remains to be done before the professional privileges and advantages, enjoyed by the eastern and older commonwealths, shall come to us here, accruing to our own and the good of the public. But there are true hearts working actively to this end, and the outlook is bright. The first organized meeting of the National Board of Health will be held May 3rd. A beginning that will amplify into untold benefits for the public weal. How rejoiced must be the hearts of our older sanitarians, like Dr. Bowditch, at this, the embodiment of their ideas, to which they have been working so long and faithfully. The convention of Medical College representatives will be held May 5th. If they could all join hands and move forward and upward together, and throw off the dross, these meetings were not in vain. The needs are patent, further talk is useless, the remedy is in their own hands. May our weak faith be put to the blush.

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ST. LOUIS
COURIER OF MEDICINE
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VOL. I. JUNE, 1879. NO. 6.

ORIGINAL LECTURES.

SYMPATHETIC OPHTHALMIA.

A Clinical Lecture, delivered at the Kansas City College of Physicians and Surgeons.

BY B. E. FRYER, M. D., *Surgeon United States Army, Lecturer on Ophthalmology and Otology.*

I HAVE an opportunity to bring before you to-day, gentlemen, two cases of injury of the eye, and will avail myself of it for the purpose of basing some remarks on Sympathetic Ophthalmia, a disease which, even as general practitioners, you will all meet, and the study and understanding of which I can not urge upon you too forcibly. For though the subject is one fully appreciated by ophthalmologists, it hardly ever receives the attention it demands from those in general practice.

First of all I would state that Sympathetic Ophthalmia is a peculiar destructive inflammation, produced in a hitherto sound and uninjured eye, in most instances by an injury of its fellow, which injury, acting either directly or indirectly as an irritant to the nerves supplied to the ciliary region, sets up in the ciliary body such a condition of irritation or inflammation as to produce this sympathizing effect in the uninjured eye.

The cause of Sympathetic Ophthalmia, though generally traumatic, is not invariably so, for it may arise in an eye from idiopathic inflammation in its fellow, especially when the inflamma-

tion has occurred in the ciliary region, and the inflammatory process is completed by plastic exudation in the anterior portion of the uveal tract. Bony formation in the choroid of one eye is supposed also to be a cause of the sympathizing trouble in the other, though it is probable that the osseous growth acts indirectly, and by producing an iridocyclytis in consequence of its irritating presence.

Now, as we will show you hereafter, the only absolute safety and freedom from the risk of Sympathetic Ophthalmia, when an injury is of the kind I have mentioned, and when this injury has resulted in an irritation or inflammation of the ciliary body, or when we have conditions resulting from idiopathic inflammations of this body, be they traumatic or not, is removal of the damaged eye. The operation of enucleation, however, will rarely be of benefit if the sympathetic inflammation has fully started, and its destruction thoroughly begun.

The *first case* I present to you, gentlemen, is that of A. Eberhart, of German birth, a farmer; his age is 39. About two weeks since, while cutting wood, a chip with, as he believes, a piece of ice attached to it, flew up and struck his right eye, making an irregularly shaped wound in the sclera of a little over two lines in length, and into the ciliary body. The wound is below the cornea, and towards the nasal side. He presented himself a week ago, some days after the injury, when the following conditions, which I now show you, were recognized: There were marked photophobia and increased lachrymation. The wound, which had had an irregular outline, was nearly healed, with more or less pigment engaged in the cicatrix, the edges of which were uneven. There was, and is, a good deal of ciliary tenderness, as I show you by directing the patient to look downwards, and then pressing gently in the ciliary region with the pulp of the finger, or the blunt end of a probe. You observe the man winces with pain. The tension of the eye is nearly normal—vision in the injured eye is reduced so much as only to give a very slight perception of light. On examining the eye by oblique light we find the lens cataractous and the pupil dilated, but irregularly so and not changed in color. The ophthalmoscopic examination gives no assistance as to ascertaining the condition of the fundus, the lens being cataractous, (traumatic cataract) though this method of illumination enables us from the peculiarity of the reflex to say that there is blood in the vitreous.

The patient complains of constant pain, which his facial expression evinces as not slight. There is, as yet, no pain in the left eye, and no tenderness in the ciliary region there, though the man says that with his sound eye he cannot see near objects at all clearly, if looked at more than a few minutes at a time; that in reading the type becomes blurred, and that the page has a red appearance to him, but all this disappears if he rests the eye a few moments. But the examination with the Snellen types shows that vision is normal and the range of accommodation moderately good.

Now we have in this man's case the condition which is termed Sympathetic Irritation—of which I shall speak later. I urged upon this patient when I first saw him, a week since, and then several days after the injury, the necessity of the removal of the injured eye, and though not ready at the time, he is to-day willing to submit to the operation. Enucleation of the injured eye will prevent the sympathetic inflammation in the other eye, which, as I have said, as yet, only shows what is known as Sympathetic Irritation. I shall operate before you, after having shown you another case and made some remarks applicable to both cases and to the subject of Sympathetic Ophthalmia generally.

The *second case* is one in which the injury is of longer standing, and I am indebted to Professor Halley for being able to present him here to-day. The patient, B. Gradwohl, a German, aged 35 years, a worker in iron. About four weeks since, while turning iron, a piece of the metal, a very small chip, struck him in the left eye, and, as he supposes, rebounded and did not enter the eye. I believe him to be mistaken in this, however, for I find that the lens is cataractous, and we notice a small gray spot at the outer and lower border of the cornea. At this point I believe the small piece of iron entered, and passed into and probably through the lens. We find that there is considerable pain in the eye, and this is increased by pressure over the ciliary region; that vision is so reduced as only to afford the very faintest perception of light. On examination by oblique light we find the lens is markedly opaque (traumatic cataract). The illumination of the fundus is of course impossible. The right eye is slightly painful on pressure over the ciliary region, and vision in this eye is reduced to 10-20, and near objects not clearly seen become more indistinct if looked at for

any length of time. The fundus shows the vessels larger than normal; a considerable reddening of the optic disc, with still a definition of its outline, however. The vitreous is clear. Now, in this case the uninjured eye has already commenced the sympathetic trouble, which will probably be mainly a sympathetic neuro-retinitis; and this is rather a rare form of the sympathizing process. The man does not realize his danger and has not given his consent to the removal of the injured eye-ball, which was his only chance for retaining vision in the uninjured eye. I say *was*, because it is not at all certain that removing the injured eye at this time, when the sympathetic trouble has commenced, would be of benefit.

Remarks.—Now we find in these two cases of injury, conditions which are quite instructive. In the first case there is, as I have said, a state of sympathetic irritation in the uninjured eye; in the second case, sympathetic inflammation, though in its incipiency, may be said to exist. In the one, the first case, there is at this time only a threatening of danger to come to the vision of the uninjured eye; in the second case the destroying process has already begun, as it may start at any moment in the first case.

But before considering further these cases as to their treatment, it will be well to tell you briefly the symptoms, the prognosis, causes and treatment of Sympathetic Ophthalmia generally; and you will then be better able to appreciate the conditions of each case, as they have been given.

The first symptom of the commencing trouble in a hitherto sound eye is generally a gradual decrease of vision, and especially is there a difficulty in seeing near objects clearly. This may increase or subside for a time. If vision is not diminished or but very slightly lessened, and if the patient, when he sees near objects dimly after looking at them some time and by resting his eye a short period, is again for a little while able to see these near objects, now clearly, he is probably suffering from the condition already spoken of as Sympathetic Irritation; and this may disappear to again show itself at shorter and shorter intervals, or may be continuous until the actual sympathetic ophthalmia is inaugurated. While yet as sympathetic irritation we may have pain, though not generally severe, it is increased if attempts be made at using the eye. There may be, and often there is, photophobia and increased lachrymation, even without prolonged attempts at use. The

duration of this sympathetic irritation is variable, and no prediction can well be made on this score.

Now as to whether this condition of which I am at present speaking is the initial stage of a full sympathetic inflammation to follow, or whether there exists an actual connection or relation with the latter, cannot now be determined: but it is certain that, though in some cases the sympathetic irritation will cease for a time, and possibly not return, in others, and they are with the majority, it will go on and merge into the destructive form gradually, and often without a possibility of saying as to the exact time when the one ceases and the other begins.

The Sympathetic Ophthalmia may be either a Sympathetic Irido-choroiditis (the most frequently met with), a Sympathetic Choroido-retinitis, or a Sympathetic Neuro-retinitis, though but few cases of these latter have been reported. Another form is the Sympathetic Serous Iritis, also rare, and if it remains uncomplicated is less destructive and more amenable to treatment than the others, though it may, and sometime does, merge into an Irido-cyclitis.

I will briefly give you the symptoms of each of these forms, but would wish you to remember that in practice you are apt to find any one of them complicated by another, and that rarely does each form retain its complete individuality throughout its course, while frequently more than one exists from the start.

One of the earliest symptoms of all the forms of S. ophthalmia is deterioration of vision, and this may be very gradual in its progress, so much so as not to attract the attention of the patient—and this loss of visual power, without notice being taken or complaint made of it, is especially apt to occur in the case of children. I refer now, of course, to the time when, as yet, there is no great iritic exudation or marked cloudiness of the optic media.

In the S. Irido-choroiditis, we may notice, with or without premonitory pain in the eye and over the brow, more or less circumcorneal congestion. Inflammatory changes begin in the iris; its color is abnormal; exudations of plastic matter occur behind it in the posterior chamber, in the substance, or at the pupillary margin. If this latter occurs, and exudations go on in the iris posteriorly, the latter is pushed forward, stretching its structure and decreasing the anterior chamber. After a while the periphery of the iris may be retracted. If the pupil is not

blocked, we are apt to find more or less cloudiness of the vitreous, and possibly floating opacities, If it be possible to view the fundus we may find the vessels large and tortuous, the outline of the disk indistinct, and the details appear as objects seen through a fog.

Although there may be in some cases little pain as a premonitory symptom, we find it in most instances, and even in those in which it is not ordinarily felt, the rule is that it can be provoked by pressure in the ciliary region. And I would say here that pain, as provoked by pressure in the ciliary region of the damaged eye, will almost invariably be found to warn us that while this sensitive condition lasts there, the pain which I have just spoken of, in the uninjured eye, is liable also to show itself as the first symptom of the coming sympathy.

The tension of the eye-ball varies, and it may be, and generally is, increased in the early stages, with fluctuations throughout, though finally it is apt to be markedly subnormal.

In the S. Choroido-retinitis, according to Graefe, who recorded two cases, we have rapid deterioration of vision, with narrowing of field in the temporal portions and paralysis of accommodation. The retina appears hazy, its veins enlarged, and tortuous.

The symptoms of S. Serous Iritis are quite similar to the ordinary serous inflammations of the iris. The iris is changed in color, and the aqueous, which may be cloudy, is increased in quantity, and the anterior chamber deepened. The ciliary region is not apt to be sensitive unless the ciliary body becomes involved. This form is not a severe one if uncomplicated.

From what I have told you, we can safely lay down the rule in the rough, that in the sympathetic ophthalmia our prognosis should be most unfavorable.

The S. Irido-choroiditis, the most dangerous of all, very generally destroys vision. The S. Choroido-retinitis allows of a more slightly hopeful prognosis, especially if there should be no marked absorption of the choroido-retinal elements, which are so apt to accompany the absorption of inflammatory products. In two cases of S. Neuro-retinitis, reported by my friend Dr. Pooley, of New York, the vision in one case was reduced to 5-200, and remained so; and in the other, the vision had gone to 20-200, but by treatment it was brought to 20-30. The prognosis in S. Serous-iritis, will be the most favorable of

all the forms; it generally yielding to treatment. Mooren, according to Wells, believes that when sympathetic inflammation begins in the iris, the prognosis may be more favorable than when it begins in the choroid, and that it is most destructive when it originates in the ciliary body.

When commencing in the iris, and the pupil has become either occluded or excluded, our prognosis should be much more unfavorable than if we had only partial synechia, but unfortunately we either see cases where the pupil is already wholly adherent, or plugged, or often the iris being sluggish, as it were, refuses to respond to atropine, and the complete synechia forms in spite of treatment. Wells states that the disease is more apt to follow in young persons, and that it shows itself earlier after injury in those, than in older people.

The peculiarly obstinate character of this inflammatory and destructive affection, is one of great practical importance, and its persistence and obstinate progress, almost wholly in spite of all treatment against it, should be thoroughly understood and appreciated.

The *causes* of the affection, I have alluded to in the definition of the disease. Wells states concisely, "that they are to be sought for in those lesions which may set up plastic inflammation of the ciliary body," and as we have said, this may be wounds, especially those involving the ciliary region: foreign bodies in the eye, especially if they have entered through the ciliary body, though this is not essential; their remaining in the vitreous without having directly injured the ciliary body, is a cause. Idiopathic irritations and inflammations of any nature, which result in plastic exudations in the ciliary body, may be a cause. Donders found in his dissections of eyes removed, and which had received injury and caused the sympathetic trouble, that a ciliary nerve could generally be found involved in the wound.

As to the time which may elapse after the injury or other irritating cause has been had before the sympathizing process will show itself, no rule can be made; it may occur in a few days, and may not appear for years. I saw one case, which was shown me by my friend, Dr. Gruening, in New York, in which eight years elapsed after the reception of an injury to one eye, before the trouble commenced in the other. Wells gives a case in which twenty-six years after the reception of an injury by a piece of metal, which latter destroyed the eye, sympathetic ophthalmia appeared.

At one time it was thought that the sympathizing process was brought about through the optic nerve. Most oculists now, however, and on good ground, believe that the irritation is transmitted through the ciliary nerves. In confirmation of this, Iwanoff, Herschberg and others, have pointed out that, in eyes removed for producing sympathetic ophthalmia, the ciliary nerves were stretched by the inflamed ciliary body becoming detached. It has been shown by Graefe, too, that in an eye sympathizing from an injury in the ciliary region of its fellow, that at a corresponding point in the sympathizing eye, the process starts as evidenced by pain at that point.

Treatment.—From the fact of the destructive character of sympathetic ophthalmia—from our experience of the futility, in general, of all treatment after the process, in most of its forms, has once begun, we can readily see that our efforts should be mainly directed to *prevent* the outbreak of the disease. Now, the only certain means we possess for the purpose, is the removal of the injured or damaged eye. I have told you the kind of injury which is likely to produce the sympathetic trouble, and we have in the two cases now before you very good examples of this. Should there be the slightest hesitation in recommending the removal of the injured eye in both of these cases? I say most certainly not. In the first case the injury has practically destroyed the sight of the right eye; it will never be of service to the man; there should therefore be no hesitation. In the second case the injured eye is also so far damaged as to be out of the question of any further service, and its removal may possibly be a benefit to the sympathizing eye. I would have you remember, however, this fact, that in any case in which an injury to an eye which does not destroy vision, but which has already set up a sympathetic inflammation in the other eye, it becomes a question then as to the advisability of operating. For knowing that, in all probability, in the sympathizing eye vision will ultimately be destroyed, we may, by allowing the injured eye to remain, give some slight amount of vision to the patient, which, by enucleating it, we should have deprived him of. If, in this man's case, with the sympathetic process so far advanced and going on so rapidly, there was a promise of a fair amount of sight for the injured eye, it would be a question to be well weighed as to whether, under the circumstances, enucleating at this stage would be advisable.

In any event where the operation of removal of an injured eye is recommended, you will find that patients and their friends, as a rule, oppose it; but having pointed out the danger and given your advice as to its necessity, you will have placed yourself in the proper position and you will have the satisfaction of not only knowing your duty, but of having done it also.

In any case where you have sympathetic irritation of an uninjured eye, I reiterate, your patient is not safe: operate; and even where there is not this irritation, pain on gentle pressure by the finger or probe over the ciliary region, and more particularly at the upper portions, should caution you of the danger to come. Moreover, if you cannot produce pain, and there has been no injury directly of the ciliary body, as there probably was not in the second case, but where in all probability you have a foreign body lodged in the vitreous somewhere, remember that the foreign substance will, as a rule, not long remain innocuous, but will provoke trouble, and the very trouble too, which will involve a cyclitis among other difficulties, and you will have in all probability the sound eye sympathizing.

In regard to the extraction of foreign bodies from the eye, you must be guided by circumstances, remembering that when situated at a point safely reachable with instruments they should be removed. When in the vitreous, and their location can be exactly made out, it is sometimes safe to make the attempt, but the utmost skill and delicacy are necessary, and even with these it is rarely possible to bring away the offending substance without injury.

I shall now, gentlemen, operate for the removal of the injured eye in the first case I brought before you. The operation is quite simple. The patient being now under the chloroform, and the speculum introduced, with a fine pair of forceps the conjunctiva is raised and snipped by the scissors. Then, as you see, a strabismus hook is placed in the opening under the conjunctiva and one blade of the scissors entered, and the conjunctival membrane is divided all around the cornea. Then the tendons of the muscles are divided by the scissors, the hook slightly raising each in turn. Now a little pressure should be made to protrude the ball, and the scissors, which should be curved on the flat, are introduced from the temporal side and carried towards the optic nerve, and this should be divided

carefully and without bruising, and the ball now, with a few touches of the blades of the scissors to divide any connective tissue holding it, is removed. I usually make a little pressure to arrest the oozing (there is generally no severe hemorrhage), and then I apply two sutures, which I do now, to hold the edges of the wound together, and will now apply a bandage with a compress of charpie.

If I have in any way *over*estimated the destructive effects of Sympathetic Ophthalmia, it is for the purpose of inducing you to be fully aware of its dangers and that you may not *under*estimate the importance of the disease, nor fail in your duty to your patients in pointing out their risk, nor your duty for yourselves so far as being able to give the proper admonition and advice.

Note.—The man operated on had the stitches removed ten days after the operation, and the wound was nearly healed. All irritation of the sound eye had passed away.

In the eye of the second case vision is still diminishing, and now amounts to only 10-200.

ORIGINAL ARTICLES.

NECROSIS.

By R. T. Henderson, M. D., Shawneetown, Mo.—*Abstract of a paper read before the South-East Missouri Medical Association.*

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Bone, by a peculiar and admirable arrangement of its nutritive supply, is endowed with a grade of vitality equal to that of the most favored tissues of the body; also with all the attributes of vitality, not only in its power of growth, but of development, regeneration, repair and disease.

That bone holds a position among the higher tissues is abundantly vindicated by the variety, frequency and severity of its diseases. We find no morbid condition of

the soft tissues of which a counterpart may not be found in bone.

When, through violence or inflammation, the periosteum is detached from the bone, by the interposition of effusion, necrosis is brought about by cutting off the requisite supply of blood. In this way many superficial necroses are produced and also a considerable portion of the thin exfoliations we so often meet with after slight injuries.

Another primary cause of necrosis is found in the non-expansibility of bone-tissue. The interruption of one or more vessels conveying blood to soft parts is very easily amended by the dilatation of inosculating vessels, but in bone the inosculating vessels cannot dilate with the same facility, owing to the unyielding character of the long canals through which they are transmitted. The increased flow of blood in the part produced by the stimulus of inflammation crowds the unyielding capillaries so urgently that transmission of the current becomes slower and slower—the thinner parts of the blood move on, while the corpuscles become more and more jammed and packed in the channel, now relatively too small to receive their increased number, until presently the current is arrested altogether and the circulation ceases. This peculiarity of the circulation would naturally lead us to look for necrosis more frequently in the compact tissue of bone than in the cancellous, which accords with clinical experience.

Location of the bone predisposes it to injury. Miller says, the bones most liable to suffer are those most exposed to atmospheric influence and mechanical violence. "The tibia enjoys an unenviable prominence in this respect;" next he places the femur, then the humerus, cranium, lower jaw, clavicle, ulna, etc.

The most unequivocal of the predisposing causes are constitutional, including those enfeebled conditions of the system which are understood to favor mortification, such as the state induced by long exposure, privation and hardships, and particularly the condition following severe and exhaustive diseases, whlch diminish the power of the cir-

culation to maintain itself against the sudden assault of inflammation.

The predisposing conditions existing, the disease may be excited by exposure to wet and cold or injuries of any kind. Markoe says, as a direct and immediate cause of death, injury does not often act, but rather by its setting up inflammatory actions, which, by unfavorable influences, shall be so modified as ultimately to produce a fatal effect; and thus we may consider violence rather as the indirect and secondary than as the direct and immediate cause of necrosis.

In support of this I remark that even in compound, comminuted fractures we do not expect necrosis, and, on the other hand, under certain unfavorable conditions, a moderate injury will be the starting point of severe inflammatory action, rapidly terminating in necrosis.

Bell relates many authenticated cases of necrosis of the cranial bones, arising from violence so slight as not to interrupt the continuity of the soft parts; some cases even arising from forcibly pulling the hair of the head.

Mercury is one of the prime causes of this disease. Prof. Miller says that there is no more frequent cause than imprudent and unnecessary mercurialism. The action here is more frequently that of caries than of necrosis, mainly because the alveolar rather than the compact tissue of the bone is attacked. Markoe says we do, however, occasionally find that the inflammation creeps along the periosteum, separating that membrane from the bone, and producing actual necrosis, generally of a limited portion of the jaw-bones.

Phosphorous acid, generated in the process of the manufacture of matches, is a very frequent cause of a peculiar form of necrosis of the lower jaw; and it is very remarkable that the operatives having sound gums and teeth are rarely attacked, whilst those who have carious teeth, or spongy gums, are extremely liable to be attacked; and any who are exposed to the phosphorus fumes soon after the extraction of a tooth are almost certain to suffer.

Properly speaking, we cannot say acute and chronic necrosis, yet the periostitis, or osteo-myelitis, which leads to local death, may be acute or chronic—the most extensive and destructive depending on the acute. The greater part of necrosis—that is, the separation of the dead portion of bone and the formation of its substitute—is invariably chronic.

The *extent* of necrosis is various. Varieties may be classed as *superficial*, *internal*, or *central*, *complete*—where the whole thickness but not the whole length of the shaft is involved—and *total*, where the entire bone has perished. This latter is rare. To illustrate this subject I will introduce a case coming under my observation. During the winter of 1860, S. H. S., aged eighteen, a large, robust, healthy young man, free from scrofulous or syphilitic taint, whilst at play with his fellow students, fell over a log, injuring his leg; he limped away, however, and soon thought himself all right again, walked home in the evening—a mile—assisted in doing the chores usually done about a farm house at this time of the year, ate his supper and retired at the usual hour, seemingly well. During the night he was awakened by a severe pain in his thigh, attended with high inflammatory fever. A neighboring physician was called in, who diagnosed acute rheumatism, and conducted the case for several weeks. At the expiration of this time, the patient being greatly reduced, night sweats and other symptoms of exhaustion having set in, another physician was called in consultation, who detected fluctuation, lanced the limb at several points, recommended, instead of antiphlogistics, cod-liver oil, iron, eggs, beef-tea, and stimulants. Under this treatment the patient gained rapidly. After a time he began going on crutches, by and by threw them away; to-day he is active and the picture of robust health, yet his leg has never ceased to suppurate for any length of time, and at times has been quite painful, though it is yearly improving. Although I have advised an operation, he has persistently refused.

Now, we will suppose, in this case, that the injury produced an acute periostitis and osteo-myelitis, resulting in

necrosis of the femur, of the third variety, that is, involving the whole thickness, but not the entire length of the diaphysis. The periosteum and medulla have suppurated; within the bone, the pus falls to detritus, or actually putrifies; the pus from the periosteum has been let out through the skin; the circulation in the diaphysis has ceased, and of course is no longer associated in any of the vital changes which go on about it. The next step in the process is that of separation between the living and the dead bone. This action is accomplished by an interstitial proliferation of granulations of the living bone, by which a slight amount of it is consumed, so that at last the osseous substance is entirely replaced by soft granulations at the ends; the granulations forming here break down somewhat, soften to pus, leaving the ends of the sequestrum entirely detached from living bone. Long previously, however, months and perhaps years before the complete separation of the ends of the sequestrum, its entire circumference is surrounded by a large abscess-cavity, the walls of which consist of tissue infiltrated with plastic matter, and on its inner surface, next the sequestrum, like any other abscess-cavity, it has a granulation layer, which constantly produces new pus. The sequestrum, with the detachment of the ends, lies loose in this pus cavity, imbedded in pus granulations, which, usually pretty accurately, fill up the space between the sequestrum and the abscess walls.

During the detachment of the sequestrum, other important changes have been taking place in the surrounding tissues. These processes consist in an ossification springing up from the parts surrounding the dead bone, reaching from the living bone above to the living bone below, which, by its abundance and perfect organization, supplies support. The question arises as to the origin of the new bone, and there are few questions upon which opinions have been more fluctuating and contradictory. According to Billroth, the involucrum is formed in the thickened layer of the wall of the pus-cavity, which, he insists, consists of

tissue (connective or tendinous, or even of muscle) infiltrated with plastic matter, and not of periosteum, as other surgeons and pathologists contend.

This long envelope continues to increase in thickness, and in the course of years, if sequestrum remains, it may be over half an inch thick, compact and strong. This process applies to a complete, as well as a partial, necrosis of the diaphysis, and corresponds to that stage in the process of the disease, at which the patient, whose case I have just stated; has arrived and at which he may remain for years to come. But should he get rid of the sequestrum which he is continually carrying in this bony case, the cavity would fill up with granulations, and these would ossify, and the bone be thus completely restored, at least, for all the purposes of practical utility.

Pathologists would do well to enlighten us in regard to the texture of this new structure. It is, especially, strange that no one can tell us positively whether the medullary canal is perfectly restored.

Where the sequestra are small they may be completely absorbed, or they may find their way to the nearest surface and be discharged. But where the sequestrum is large, the mechanical obstruction offered by the involucrum can only be overcome by an operation.

The changes just described also apply to the flat and short spongy bones, except that new formation is much less and often entirely wanting. I may here also notice two very striking peculiarities in cranial necrosis: an indisposition to the separation and casting off of the dead bone, and a disposition to spread slowly and gradually, so as to invade large tracts of neighboring healthy bone, thereby rendering this a formidable affection.

The disease, during the earlier stage—the stage of inflammation—is attended with high fever, delirium existing sometimes during the first days. The first exudation probably takes place between the periosteum and bone; it is here also that suppuration begins, and separating the periosteum from the bone, distends that membrane as far

as its unyielding nature will permit, causing intense pain; by and by, the periosteum gives way, the pus escapes into the soft tissues, and finally finds its way to the surface, when the first stage may be regarded as terminated.

On the evacuation of the pus, the fever and pain abates, the swelling subsides, and the patient and—often—the physician congratulate themselves that the case is rapidly returning to a healthy termination. Instead of this, however, it is found that the abscess does not heal; fistulous openings continue to discharge pus; the limb remains somewhat swollen and tender, and is liable to occasional recurrence of inflammation. As the case progresses, the swelling and induration of the soft parts gradually disappear, while a deeper and firmer enlargement takes their place, which is manifestly due to the gradual formation of the involucrum. The limb remains but little changed during the time of the detachment of the sequestrum, or as long as the sequestrum remains. The abscess contracts down to mere fistulæ, the soft parts resume their natural condition, and the discharge, though under favorable circumstances not large, continues while the sequestrum remains.

The diagnosis during the first stage is difficult. The diseases with which it is most liable to be confounded are erysipelas, simple phlegmon, or rheumatism, and no one can with positive certainty, in all cases of inflammation, say which are to terminate in necrosis; but the possibility of the symptoms depending on periotsitis, or osteo-myelitis, leading to necrosis, being borne in mind, it is not likely that the careful observer will long be deceived.

After the more active stage has passed away, on account of the continued discharge of pus and increased thickness of the extremity, we suspect extensive new formations of bone. The probe, however, will give us definite information. We pass as large a one as possible through the opening from which the pus flows, and, if it be necrosis, we come in contact with the sequestrum, the surface of which is usually smooth and firm, and if detached movable.

Caries is almost the only disease for which necrosis at this stage can be mistaken. The mode of origin and locality aid greatly in the distinction, for necrosis occurs, more frequently, as a result of acute inflammation in the hollow bones, caries usually occurring more slowly in spongy bones. In caries there is but little formation of new bone about the ulcer, often none can be felt; in necrosis this is extensive; in caries, the pus is thin, bad, sanious: in necrosis, it is thick, often good, frequently mucous; in caries, we pass the probe into rotten bone, and probing is usually quite painful; in necrosis, the probe generally strikes the sequestrum, and under judicious care is not often painful. Indeed the differential diagnosis between these two diseases is in most cases very simple and easy.

The prognosis in most cases may be rendered favorably; the conditions most unfavorable being original weakness of constitution or a scrofulous or a syphilitic diathesis.

Necrosis of the cranial bones being the most formidable, is attended with most danger. Aside from constitutional weakness and local danger, we have other sources of danger arising during the progress of the disease, the chief of which is hæmorrhage. We have indicated that the sequestrum when separated has a tendency to work its way towards the surface, during which it is liable to encounter some artery of importance, which may be wounded by its pressure. In long-continued suppurations from bone, albuminuria is not unfrequently developed, and, although usually of a mild form, may be a source of danger.

The first indications in the treatment are, to combat the inflammation on which the necrosis depends. This is best accomplished by rest in the recumbent position, painting the limb with strong tincture of iodine, and the administration of saline cathartics. Cold applications are highly recommended by some authorities, and are highly to be commended, particularly where the joints become implicated by the inflammation. Some surgeons are in favor of making deep incisions down to the bone, early, or as soon

as suppuration begins. Such a procedure I would discourage, because such extensive wounds are bad in feverish patients, and increase the predisposition to pyæmia. Much may be done in the way of securing more perfect quiet and freedom from pain, by means of properly adjusted, fenestrated plaster-splints; these are especially commended where the joints are involved. Should our efforts fail in subduing the inflammation, and suppuration occur, as soon as fluctuation can be detected at the thinnest point we should make several openings in such wise that the pus shall escape without being pressed out.

The active inflammatory stage subsiding, the physician has but little to do, except to watch the progress of the disease, until sequestration is accomplished. During this period, if necessary, we prescribe such remedies as will improve the general vigor, and increase the tone of all the active functions of the body, but by no means using chemical or stimulating agents, or mechanical contrivances, with the view of expediting the separation, as recommended by our earlier surgeons; better do nothing, leaving the case to the conservative powers of nature, than to be harmfully meddlesome in our eagerness to do something.

We wait patiently until the sequestrum is *completely* detached, and then remove it. The rule accepted and insisted on is, never to attempt the removal until complete detachment has taken place, a fact not *always* so easily ascertained; yet, in many cases, this can easily be done by the touch of the probe, which immediately reveals the fact if the dead piece is movable. Where we fail to detect mobility, we will have to trust to probabilities. In such cases, length of time since the bone was ascertained to be dead, the thickness of the bony case, the pouting, exuberant granulations presented at the orifices of the sinuses, are all important aids in determining whether the sequestrum be detached or not. Most sequestra are detached within eight or ten months, the separation taking place earlier in children. Where we are in doubt, it is better to postpone interference for a time. Having ascertained, however, that the sequestrum is loose, it is the duty of the

surgeon to remove it, by the operation of sequestrotomy.

The first step is, to cut down to the involucrum, selecting the most favorable situation, avoiding important blood-vessels and nerves, and saving the soft parts as much as possible. It is advisable to open on the side on which the fistulous openings present, if practicable. If the opening in the involucrum be sufficiently large, and the sequestrum small, we may seize it with a strong forceps and remove it without trouble. But if the opening be small and the sequestrum large, a portion of the bony case must be removed. Selecting, if practicable, some of the cloacæ as a starting point, with chisel and hammer, gouge, osteotome or panel-saw (some physicians preferring one instrument, others another), we work away, carefully, but with never faltering energy, until the opening is sufficient for the removal of the sequestrum with lever and forceps, when the indications shall have been fulfilled. After the operation the cavity is to be kept clean, the patient kept in bed, and great caution exercised for some time. The final filling up of the involucral cavity is a very slow process, and so, therefore, is the final healing of the wound, some cases requiring months and years.

No surgeon is justified in amputating a necrosed limb, unless he has exhausted every resource of our art to save it. In cases where important blood-vessels have become eroded and the hæmorrhage cannot be controlled, amputation may become necessary, or it may be demanded in cases where large joints become implicated in the suppurative process, or in case of extensive death of bone throughout its whole thickness, when the expected reproduction has failed; or yet, there are, rarely, cases in which the system is unequal to the contest of bearing up under the burden of continued irritation and copious discharge, before the separation of the sequestrum is complete, in which amputation may be demanded to save the life of the patient. But even in these cases a combination of knowledge, judgment and experience should be brought to bear and the great responsibility of sacrificing an important limb should outweigh all other considerations.

EDITORIAL.

DR. A. J. STEELE, *Editor*. DR. W. A. HARDAWAY, *Associate Editor*
PROF. E. W. SCHAEFFLER, M. D., *Corresponding Editor*.

"It is not so much what you ought to do, as what you ought to know not to do."—*Sir Benjamin Brodie, Lectures*, 1837.

THE LATE CONVENTIONS.

THE past month (May) has been a star month in the Medical Calendar of the year. To the profession at large it has been fraught with much of importance and interest through the various conventions of medical men that have been held, commencing with the National and running down through the various State and local societies, besides the meetings of accessory organizations: the National Board of Health, the Sanitary Council of the Mississippi Valley, the American Health Association, the Medical College Association, and the Association of Medical Editors. It has been like a great agitation, a mingling and a commingling. New elements came to the surface and to light, while old elements sank into further oblivion. And now that it is passed, we may look down, as from a vantage ground, upon the fields where the fraternal greetings and strifes for emulation occurred, and note the results, the outcome of it all.

THE SANITARY BOARDS.

Our profession is certainly alive to the great objects which its creation and perpetuity are bound to conserve. Prouder are we than ever before that our names are enrolled in its lists. While a legitimate and creditable amount of selfishness may actuate individuals, still the profession at large or as a body have unparalleled philanthropy, and give their best thoughts and their most active deeds for the good of others. This fact has lately been

emphasized in the various health councils that met to consider how best to prevent disease and to prolong human life. 'Tis true there had been, in the dreadful scourge of last summer, a text, a torch, to awaken and concentrate the energies that might be put forth to prevent sickness in certain of its forms, but, thank God, that opportunity was improved, and we lately had at Atlanta the sanitary wisdom of the nation in council. From its deliberations there held we may expect in a near future great good to come.

THE MEDICAL COLLEGES.

In regard to the advanced action (!) taken by the Medical College Association at its meeting held May 5, our weak faith has not been "put to the blush," only twenty-three of the fifty-nine colleges of the country being represented. All the proposed changes looking to improvement were laid upon the table for one year. The single positive resolution adopted was to the effect: "That it shall be considered derogatory to the dignity and good standing of any medical college to advertise in any other than a strictly medical publication the names of its professors with their respective chairs." The broom is beginning to sweep, and may it not be laid aside until the accusation that the medical colleges are "huge advertising corporations" be flung back into the faces of their traducers, nailed a lie. Just here we would say that we do not blush for either the position or standing of the two representative schools of St. Louis,—with an aggregate attendance last winter of 400 students. They have already taken positive steps looking to advance, and we are in a position to know that they have still more important changes in contemplation, which will be made as soon as possible compatible with their existence. A college cannot exist without students, and thus our St. Louis schools are between Sylla and Charybdis, desiring to be as advanced as the most extreme dreamer could wish on the one hand, and on the other obliged to compete with colleges in towns of some of our neighboring States, not ten thousand miles away, which *bid* for students chiefly—advanced requirements being far

in the background. As indicated on another occasion, the members of the profession have some responsibility in this matter; they should encourage the most progressive institutions by sending their young men to them.

AMERICAN MEDICAL ASSOCIATION.

In another place we give as full a report of the proceedings of the National Association as our space will allow. With an attendance of about 400 registered members, it was a successful meeting, though the work in the sections was not quite up to the standard. Some excellent papers were presented at the morning sessions, which will be read with interest and profit, *i. e.*, if the Transactions are gotten out within a reasonable time, and not delayed, as they were last year, some eleven months.

The profession and citizens of Atlanta extended a most hearty welcome to the members of the Association, for which we, in behalf of the Missouri delegation, return thanks.

The meeting next year, to be held in New York, will doubtless be more largely attended than any ever before held. The attractions of the city itself will draw, and the local profession will make unusual exertions looking to the entertainment, interest and instruction of the attending members.

THE MISSOURI STATE MEDICAL ASSOCIATION.

With 102 members present, the late meeting held at Columbia was, without exception, voted a success, and, we may safely say, that never before had the local welcome been so generous and hearty. If our friends at the "University City" can find any return for their hospitable labors in the knowledge that they gave great and satisfying happiness to their guests, then they are that much, at least, repaid.

A dozen or more valuable scientific papers were read, and though the discussions on the same were not as full and free as could have been desired, yet much of profit and interest was afforded. The address of the retiring presi-

dent, Dr. Schauffler, was exceptionally good, and will be perused in the forthcoming Transactions with interest and profit.

In the selection of Prof. G. M. B. Maughs for president, the Association honored one whose labors have for many years been directed to the advancement and up-building of the profession in our commonwealth, so that this, the highest gift in the hands of the profession of the State, is not unmerited.

We bespeak a large attendance at the meeting to be held at Carthage next year, where the association may be able to give much encouragement to the profession in that part of the State.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.

Though we were not able to attend the regular business meeting of the Association, held at Atlanta, May 5th, yet we were fortunately permitted to be present at a social gathering of the quill men afterwards, held at the residence of Dr. Powell, where a most elaborate "barbecue" greeted his guests, and where good feeling and social spirit reigned supreme. At the meeting of the association to be held next year in New York, the COURIER shall hope to be promptly represented, for we realize that great good may result from a *live* association of the editors of our medical journals.

ACOUSTIC HALLS.—For many reasons, architects are not blessed by the doctors, among which is the fact that they build halls without acoustic properties. We were reminded of this at the late meeting of the State Medical Society, the first day's sessions of which were held in the college chapel, where the acoustic properties are most unfortunate, notwithstanding the dimity suspended from the surrounding gallery and the infinite number of wires stretched overhead, which at first, in our innocence, we thought to be an Æolian harp arrangement to discourse weird (wired) music, when the sashes should be thrown

open to admit the Columbian zephyrs. The hall is semi-circular in form—the same as the old Senate and Representative halls in the Capitol at Washington, planned, we believe, by the same brilliant mind, and which had to be renounced because the nation's eloquence was wasted (possibly not a great loss) upon the echoing air.

At the first day's meeting of the Surgical Section of the American Medical Association lately held at Atlanta, and which was honored by having as a place for its discussions the State Hall of Representatives, an enormous room, three stories in height, most of the listeners remained in blissful ignorance of what was being said, unless the speaker possessed the thundering eloquence of a John Randolph.

These two are not exceptional instances. We have experienced the same inconvenience in other places, and at former meetings of the Medical societies. At such times the committee of arrangements should select halls small rather than large, and possessed of acoustic properties.

Advance in Lecture Fees.—At the same time and place that the convention of Medical Colleges was held, the representatives of the Colleges in the West and South had a conference on the simultaneous advance of lecture fees, and it was decided to recommend an advance to $75, exclusive of matriculation and graduation fees, to some twenty-three institutions; the change to be made the coming season, but in no case to be binding unless all the named schools agree.

Strange as it may seem the St. Louis Medical College was among those thus advised; whereas its fees are now and always have been, as far as we know, $105. It was certainly gross carelessness on the part of the officers or Secretary of the Committee not to have known this fact.

We sincerely trust the recommendation of the Committee may be heeded, and that all reputable schools may come to have a common standard of fees. Of course a

cheap thing is not necessarily a poor thing, but students are apt to value their privileges in proportion to what they cost them. Thus with advanced fees we will have better students, and also better professors, because better paid.

The Names of One Hundred and Fifty Physicians were reported at the late meeting of the American Medical Association as having been sacrificed in the yellow fever plague which raged in the Mississippi Valley during the summer of 1878. A roll of honor, certainly. We miss the name of Dr. H. C. Davis from the list. He contracted the fever from refugees, and died at his post of duty at the quarantine hospital, a few miles below St. Louis; of which he was in charge at the time. We will be at pains to see that his name is added to the roll, that it may appear in the published transactions of the Association.

The American Surgical Society.—After the adjournment of the surgical section of the American Medical Association at its first day's meeting, May 6th, steps were taken to organize a National Surgical Society. The movement was initiated by Prof. Gross; Dr. Dugas, of Georgia, was elected chairman, and Dr. Watson, of New Jersey, secretary. A committee was appointed on constitution and by-laws. The membership will be limited in numbers, (to 75 we believe), and the society will probably hold two sessions a year.

The Sixth Annual Session of the Interational Medical Congress, with Donders as president, will be held in Amsterdam, September 7 to 13, inclusive, 1879. The Missouri State Medical Association has been invited to send delegates.

Dr. Walter Wyman, of the U. S. Mar. Hospital service, and for a long time stationed in this city, has been transferred to Cincinnati. We but echo the universal sentiment of the profession in expressing our regret that so accomplished a gentleman and physician should be obliged to remove from among us. We wish Dr. Wyman the best of success in his new field of labor.

Colored Medical College.—The corner stone of a medical college building, to be conducted in the interests of our colored brethren, was laid with becoming ceremony at Nashville, Tenn., May 15th. The building will cost $10,000, and will be open in the fall for the reception of students. This is the second college of the kind in the United States, and the first in the Mississippi Valley.

ABSCESS OF THE TONGUE.

By J. T. Hodgen, M. D.

Mr. F. A., aged 63, called at my office and exhibited a swelling about the size of the tip of the little finger, situated on the left side of the tip of the tongue.

I was informed that two weeks before, he, after eating strawberries, observed that there was a painful tingling at that point on his tongue, and that certain red points appeared on the surface. There had been increased sensibility, and a trifling pain. The swelling, as observed by myself, projected equally on the upper and lower surfaces of the tongue. On touching it between the fingers, the sensation of a cyst was received. An incision was made, and perhaps twenty drops of well-defined, yellowish, creamy pus discharged.

I write the above for the reason that I regard the case a very rare one, never before having seen an abscess of the tongue.

CORRESPONDENCE.

NEW YORK LETTER.

Alleged Malpractice.—Medico-Legal Cases.—Plan of Preventing the Spread of Contageous Diseases Among the Brooklyn School Children.—Accident to Dr. Bumstead.—Dr. Bulkley's Lectures.—Professorial Changes.

Mr. Editor:—A case of alleged malpractice has lately been tried in one of our city courts and decided in favor of the defendants. As the case may be of interest to some of your readers, and especially those connected with hospitals or dispensaries, I will give a brief outline of it. It appears that some time in 1871, the plaintiff, a married woman, suffering from chronic glaucoma, presented herself at the Manhattan Eye and Ear Hospital in this city for treatment. After a consultation between the surgeons, Drs. Agnew, Roosa and Loring, an operation was agreed upon. The patient was then told that the only chance of having her eyesight preserved was to undergo an operation, and at the same time she was informed that even then no benefit might result from it. She gave her consent. Two weeks afterwards she left the hospital, with her eyesight in the same condition as when she entered. Soon after this, inflammation developed, and when she again entered the hospital the right eye was almost destroyed and the left was much worse than when she was last seen by the hospital attendants. Another operation was performed on one eye, as she would not consent to have both eyes operated upon. This last operation was af no avail, and she soon became blind. After waiting six years, suit was brought against the hospital for $50,000 damages. It was shown during the course of the trial that the patient, who only paid ten dollars a week, the amount charged for board in the institution, was abundantly able to pay for having the operation performed, as her husband was a man of means. After all the evidence for the plaintiff and defendants had been given, the counsel for the defence moved to dismiss the complaint. The Judge, in granting the motion, said that a general hospital for sick persons, having no capital nor provision for making profits, was a public charitable institution, and was not liable for injuries to a patient through negligence. He also said that there had not been a single medical or surgical witness on be-

half of the plaintiff who would undertake to say that, the plaintiff being afflicted with glaucoma, an operation was not necessary. It was clear that there was a careful consultation of surgeons, and that the operation was skilfully performed. Therefore, in view of the above facts, he did not feel justified in sending the case to the jury, but dismissed the case with costs. The decision in this case will prevent a great many others of a similar nature being instituted by those who seek for pecuniary damages, as a mere matter of speculation. It is astonishing to what an extent those who are in receipt of moderate incomes will impose upon medical charities, and then upon the slightest pretext institute a suit for damages. In the discussion which followed the reading of Dr. Sturgis' paper on the "Abuse of Free Medical Services," Dr. Agnew cited the case of a man admitted to the Eye and Ear Infirmary of this city, to have an operation performed on the eye, and who died, while there, of some intercurrent disease. When his effects were examined, $15,000 was found.

Another case which is exciting a great deal of attention from a medico-legal point of view, is that of Col. Dwight, of Binghampton, in this State. He died quite suddenly last November, having, a short time previous to his death, had his life insured to the amount of $256,000, in various companies. As it was understood that the companies interested would endeavor to show that he committed suicide, a post mortem examination was made by Dr. Delafield, of this city, assisted by several medical men. The result of this showed that the deceased died from paralysis of the heart. One of the insurance companies paid the policy of $50,000 issued by it, but the other corporations insisted on having another autopsy. In April last the body was exhumed, and on examining the body a crease was found in the neck of the deceased, which was no doubt a natural one, as Col. Dwight was a thick-necked and rather corpulent man. The insurance companies, however, insisted that the deceased had committed suicide, and that the mark alluded to was caused by a cord passed around the neck and fastened to the bed-post, in this manner causing death by strangulation. Dr. Swinburne was brought forward as a witness for the companies, and assented to this view of the case. Another theory advanced to support the case of the insurance companies was that the deceased, having insured himself very heavily when he had but

slender means to pay the premiums when they fell due, committed suicide, so that his heirs would obtain the insurance-money. A vexatious lawsuit will probably follow, in which the relatives of the deceased will, without doubt, be the victors.

Dr. J. H. Raymond, sanitary superintendent of the Brooklyn Health Department, in the "Proceedings of the Kings County Medical Society" for May, gives an account of the plan adopted by the department for preventing the spread of contagious diseases. Until recently, a certificate from any physician was considered sufficient evidence for re-admission to school of children who had been suffering from any form of contagious disease, and often permits were given before all danger of contagion had passed. In February of this year, the sanitary ordinances were so amended that it is now necessary, before a child who has been suffering from contagious disease can be re-admitted to school, to obtain a permit from the Health Department. The attending physician, as is the case in this city, is required to report all cases of contagious diseases occurring in his practice to the Board of Health, within twenty-four hours after his first visit, under penalty of a fine. Every case reported is visited by a sanitary inspector, and the names of all the children living in the house, together with the schools they attend, are ascertained. These names are then sent on postal cards to the respective schools. He also sees that the house is properly fumigated, and that there is no defect in the plumbing and drainage of the dwelling. If there is, he gives proper instructions as to how it should be remedied. Beside the postal cards sent by the inspector, a general list is mailed from the Health Department to all the schools, public and private, every twenty-four hours. No child is permitted to return to school until at least seven days have elapsed since the last exposure. This plan seems to promise good results, provided the physicians always report their cases of contagious disease.

Dr. Bumstead, president of the New York County Medical Society, had a narrow escape from death, about three weeks ago. He went out riding in Central Park, on the occasion referred to, accompanied by an attendant. On their return home the horse suddenly became frightened, and the doctor and his attendant were thrown out of the carriage. The former had his left humerus broken, while the latter fell on his head, sustaining a fracture of the skull, and died soon after. I am happy to

say that the doctor is convalescing, and is able to pursue his usual work.

Dr. Bulkley has just completed a successful course of twenty-four didactic and clinical lectures on skin diseases, at the New York Hospital. The lectures were free, and were illustrated by models, drawings and clinical cases. That the course was successful was shown by the attendance; the lecture-room, capable of seating one hundred persons, was always crowded, and often as many as twenty or thirty were compelled to stand up. Among the audience were several eminent practitioners residing in the city. Dr. Bulkley intends to continue his clinical lectures during the summer, except in the very warm weather, and to resume the didactic course with the commencement of the fall session at the various colleges.

The following are some of the changes lately made in the various medical colleges in this city:

Dr. Henry B. Sands, formerly Professor of Anatomy at the College of Physicians and Surgeons, has accepted one of the chairs of surgery in that institution.

Dr. J. Williston Wright succeeds Dr. Darby as Professor of Surgery in the University Medical College.

Dr. W. M. Polk, formerly Professor of Materia Medica in Bellevue Hospital Medical College, takes Dr. Wright's place in the University, as Professor of Obstetrics. C.

New York, May 22, 1879.

COMMUNICATIONS.

MEDICAL OFFICERS IN THE MISSOURI STATE MILITIA.

Mr. Editor:—The militia bill passed by the late legislature, in addition to various other objectionable provisions, makes the medical officers h ld their commission by appointment, and during the pleasure of the various commanders of regiments, brigades, etc. No examination is requisite to establish the qualification of the surgeon, upon whose decision depends the weal or woe of the men and officers, and against whose prescriptions and orders for treatment there is no appeal, (for it would be insubordination to refuse to obey his injunctions).

It is not requisite that the medical officer be a graduate of any school, the pleasure of the commanding officer suffices to appoint any acquaintance, styling himself doctor, who may be able to ingratiate himself by promises of copious supplies of hospital whiskey, or extra rations of delicacies provided for the sick.

At the opening of the late unpleasantness in 1861, the Missouri legislature, in the hot haste and flurry of martial preparations, passed a militia bill with similar provisions for the management of the medical department. It is useless to tell those who were in the service at that time, that the programme did not work well, and that a subsequent bill had to be passed, requiring examination before an army medical board as a prerequisite to a commission as Surgeon or Assistant Surgeon in the "Missouri State Guards." The gentlemen composing that board, (who are yet living, an honor to the profession), had a rare experience in sifting the promiscuous material, until shortly afterwards the State organization was merged into the Confederate with its strict requirements as to qualification of medical officers.

This experience, however, appears to have been entirely lost upon our legislators, and a more objectionable method, or rather lack of method, than the one adopted, could hardly be imagined. Let it be the care of every worthy member of the profession to so enlighten the members of our legislature, that at their earliest opportunity they properly amend the law.

C.

St. Louis, May 15, 1879.

SANITARY DISCUSSIONS AT ATLANTA.

Mr. Editor:—Having been delegated by the Mayor and Health Commissioner to represent the Board of Health and Health Department of the city of St. Louis at the meeting of the National Board of Health, the Sanitary Council of the Mississippi Valley and the American Medical Association, held in Atlanta during the second week of May, I have thought that some account of the proceedings and conclusions of these respective bodies, in relation to matters pertaining to the conservation of public health and State hygiene, might not be uninteresting to those of your readers who are engaged in sanitary work and in measures

calculated to prevent the occurrence of epidemic disease. I deem it of more importance that such an account should be given, as there seems to be very little general information among medical men as to the proceedings of the first two of these bodies even on the part of those who were in Atlanta as delegates to the Medical Association,—the meetings of that body and its different sections having so absorbed their time as virtually to have precluded attendance on the meetings of the other organizations.

The National Board of Health selected the before-mentioned time and place for holding its meeting in order that it might obtain the views and conclusions of medical and non-medical men, from all parts of the country, as to the best manner of establishing and regulating maritime and inland quarantine, if need for such should arise, steamboat and barge transportation, railway travel and traffic, etc., and the means best adapted to prevent the occurence or spread of epidemic disease in the United States.

All the members of the Board were present with the exception of Dr. Bowditch, and joint meetings or conventions of this body and the Sanitary Council were held on May 5th, 6th and 7th. At the meeting on Monday, May 5th, the subject of maritime quarantine was discussed, and the opinions of representatives from all the States and more important cities and towns on the Atlantic and Gulf coasts were heard, and indubitable evidence as to the value of proper quarantine measures in preventing the introduction of infection into seaports, and of the efficiency of means to disinfect vessels when such measures are properly employed by those who know how to use them, was given. It was strongly urged further that the time of detention at quarantine or sanitary stations should be according to the nature or needs of each individual case, and not a fixed period of time arbitrarily.

At subsequent meetings of these bodies, held May 6th and 7th, the subject of internal quarantine was discussed, and I cannot do better than to give herewith the memorandum of points presented for discussion in this convention. It was reported by a committee of five appointed for that purpose, composed of representatives from both bodies. It is as follows:

1. River transportation—means of securing its good sanitary condition. (*a*) River steamers. How to secure their freedom

from infection at New Orleans. How to deal with them at various points on the Mississippi and its tributaries. (*b*) Barges and tow-boats—same queries as for steamers. Can an infected barge be satisfactorily disinfected? and if so, how?

2. Railroads—(*a*) Sanitary condition of depots and stations. *b*) Quarantine stations on railroads, their position and organization; specify for passenger trains, sleeping cars, car construction, freight trains, construction trains. (*c*) Mails. (*d*) Expressage.

3. System of notification of occurrence of first cases of a dangerous disease, especially yellow fever. When is it proper to say that yellow fever is an epidemic in a town?

4. Miscellaneous--Has any infection ever been traced to sugar? coffee?

These points were thoroughly discussed at the evening meetings of the Sanitary Council, and in the convention, by representatives of all the States in the Mississippi Valley and from nearly every large town situated in the territory indicated. As a result of these deliberation, a series of propositions expressive of the sense of the meetings were formulated and adopted. Those relating to river navigation and transportation are as follows:

Proposition 1. Every captain shall keep in a book a permanent record of the sanitary history of the steamboat from the first of April to the first of December inclusive. Such captain, before leaving a seaport city, shall obtain a certificate from a medical inspector, entered upon this record, certifying that he has personally examined the steamboat, and that all the rules and regulations relating to the cleansing and disinfection adopted by this council, while at the docks and wharfs of a city or town, have been complied with. Said certificate shall also state that the cargo of freight of whatever description is in good sanitary condition, and may be safely transported to its points of destination.

2. The captain shall daily enter upon this record all facts relating to the health of the passengers and crew, and the amount and kind of sanitary cleansing during the passage.

The following amendment to this proposition was adopted: That the captain or commanding officer be compelled to verify, by affidavit, at the time of inspection, the correctness of the daily report.

3. The re-inspection of said boat shall be required only at the point of destination, except as hereafter provided, when the medical inspector shall examine, before she discharges her cargo, the sanitary record of the boat and the boat itself. If such record has been neglected, and the boat is in a bad sanitary condition, the medical inspector shall require proper sanitary cleansing before the cargo is discharged or a new cargo is put on board. On the return passage the same rules apply.

4. All boats navigating the Mississippi shall undergo inspection in the same manner at New Orleans, Vicksburg, Memphis, Cairo, and the point of destination.

5. Wherever yellow fever or cholera prevails at any of the gulf ports, the medical inspector shall certify on the record the precautions that have been taken, and the danger to be apprehended from cargo, passengers and crew. The inspection must be made one mile from the town, at a point suitable for the care of the sick, detention of the well, and the disinfection and cleansing of cargo and boat.

It was moved that the above rules and regulations apply to tugs, tows and barges.

During the course of the discussion which preceded the adoption of these propositions, the case of the tow-boat Porter, and her experiences on the Mississippi and Ohio rivers last summer, was cited as an illustration of the evils and deplorable consequences liable to result from river navigation, unless some sanitary control is exercised over it by competent authority, and in a manner similar to that indicated in the foregoing series of propositions. There is nothing even attempted in this direction now, but no unprejudiced observer, who is familiar with the usual condition of very many passenger steamers, tow-boats and barges, will deny the urgent need of such control and supervision.

It is believed that the carrying into effect of the measures proposed in these propositions will inaugurate a new era in the manner in which the business of river trade and travel is now conducted, and render impossible, for instance, a repetition of the experiences of the tow-boat Porter.

The enforcement of the provisions of this sanitary code will constitute virtually a school of sanitary instruction for the owners and masters of river craft, and will serve to encourage and educate them to keep their vessels in such irreproachable

sanitary condition in healthy seasons that even during the wide-spread existence of epidemic disease, such as occurred last summer, the infecting or essential agent will find no lodgement in the furnishings or belongings of such craft.

It is hoped and believed that the appointment of the health officers or inspectors at the sanitary stations to be established along the river will rest with the National Board of Health, and these officers be thus freed as much as possible from local bias, prejudice or influence. The inspection of river craft is intended to be actual, thorough and impartial, and of the good results that would ensue from it, in authoritatively assuring the public generally of the sanitary safety of steamers, tow-boats, etc., there can be no doubt. It is not intended that commerce shall be needlessly hampered, but that it shall be made to recognize the strong hand of sanitary authority, to the end that the health and lives of the people of the entire valley may not be put in jeopardy by the ignorance or negligence of any master or owner of a vessel, or of any person who may take passage or have goods on board of the boat. The accuracy of the sanitary log or record kept by the master of the vessel in conformity with the provisions of this code, may be verified by affidavit on the demand and in the presence of the sanitary officer at inspecting stations, who will be clothed with notarial powers for that purpose.

The requirements of the code are deemed to be as reasonable as is consistent with the ultimate best sanitary welfare and safety of the people of the Mississippi Valley, which is the paramount consideration so far as the Council is concerned.

The subject of the proper sanitary regulation of railroads and railway quarantine, as set forth in Section 2 of the memorandum, was taken up and discussed at the meetings held on Wednesday, and a series of propositions relating thereto were adopted.

They are as follows:

(*a*) Sanitary condition of depots, stations, round-houses, car-shops, etc.

At all seasons of the year the depots and surroundings shall be kept in a sanitary condition, the grounds well drained and free from stagnant water and decomposing organic matter; the water closets shall be daily inspected by the local railroad agent or official, who shall cause the floor, seats, and urinals to

be kept clean and free from all offensive odor; the vaults shall be emptied so often as to prevent any large accumulation of excremental matter, and shall be disinfected every week by pouring into the vault a saturated solution of the sulphates or chlorides of iron or zinc in sufficient quantity to remove all offensive odors.

(*b*) Quarantine stations on railroads.

Whenever a railroad train departs from an infected station, no person with fever shall be allowed to take passage on such train. The baggage from such infected station shall be thoroughly disinfected before leaving such railroad station. At a point not less than five nor more than seventy-five miles from the point of departure from an infected place, there shall be an entire transfer of passengers and baggage to another train of cars, which train shall never enter an infected district; this transfer shall be made under the supervision of a medical officer; no person with fever shall be allowed to proceed on this train, but shall return to the point of departure, or be treated in hospital at the place of transfer.

No sleeping-car shall be allowed to remain in an infected town, nor shall any sleeping-car approach nearer an infected place than this point of transfer. Any passenger-car leaving an infected place shall be thoroughly ventilated during its passage to the place of transfer, by having not less than one-half of the windows of the car open during such passage.

The upholstered seats of passenger and sleeping cars, and the matresses and pillows of sleeping cars, shall be thoroughly whipped or beaten (in the open air so far as practicable), and brushed free from all dust, and thoroughly aired and sunned at the end of each trip: the blankets and curtains of all sleeping cars shall also be beaten and aired in the same way. The cars which carry freight without breaking bulk, may pass without transfer, if the freight cars are ventilated in such way that a constant current of air passes through the whole length of the car during transit. Way freight shall be transferred at a point not exceeding fifty miles from the point of departure, and the cars from which such freight has been transferred shall not proceed further on the road, but shall be returned to the city.

(*c*) Mails. The mail-matter and mail-bags shall be heated to a temperature of 250 degrees Fahrenheit, or be otherwise disinfected, before they are sent from infected places by railway trains.

(*d*) Whenever any case of yellow fever, or sickness suspected to be yellow fever, shall be found in New Orleans, or any of the gulf ports, the president of the State Board of Health of Louisiana or the president of the Board of Health of such gulf port shall at once notify all the members of this Sanitary Council of the Mississippi Valley by letter, giving the date and localities of such sickness. If the disease becomes epidemic, or spreads to such a degree as threatens to become epidemic, full information on all these points shall be given to the members of this Council by the State Board of Health of Louisiana, or president of the Board of Health of any gulf port.

Before these propositions were adopted they were thoroughly discussed, and many interesting facts bearing on the different ways in which infection may be transported were elicited. It was stated, on what seemed to be good authority, that the outbreak of yellow fever some years ago in Shreveport was due to the shipment by rail in an unventilated car of an infected package or bale of dry goods; none of those engaged in carrying the goods suffered injury, but the merchants who received them died, and a centre of infection for the entire place was established.

The objects sought to be attained by the National Board are of course the exclusion of foreign pestilence or infection from seaboard cities and the prevention and control of domestic epidemics of every character; while the efforts of the Sanitary Council will be directed specifically toward the improvement of the general sanitary condition of the Mississippi Valley. It was to be anticipated, however, in view of the recent prevalence of pestilence in the South, that at these meetings the infection of yellow fever would receive special attention and discussion, as its possible recurrence is the subject of anxious thought on the part of the southern people. The preponderance of opinion was largely in favor of the adoption of effective quarantine measures to prevent its importation, but if, through lax quarantine measures, it should obtain a foothold in this country, it was recommended and believed that rigorous, searching, unsparing municipal sanitation and the sanitary regulation of trade and travel by river and rail should be the measures resorted to, as being the best means of successfully combatting it and preventing its spread.

The various agents that can be used to destroy or render

harmless the essential factor in the production of yellow-fever disease were instanced, and may be enumerated here; and, by judicious selecti n from the list, appropriate means can be obtained to disinfect any class or kind of freight, goods or material.

The forcible ventilation of confined spaces, such as holds of steamers, freight cars, etc., was strongly urged, as being effective and a procedure that could no harm to any kind of goods. The thorough fumigation of such spaces by means of sulphurous acid or chlorine is also effectual; other means of disinfection are cremation, heat—both wet and dry,—refrigeration, nitrous acid, bi-sulphide of carbon, quicklime, etc.

As wide currency has been given to the statement that the war-vessel Plymouth had been thoroughly frozen and disinfected before starting on her recent cruise, which resulted in her being turned back by an outbreak of yellow fever, when she had reached a point several hundred miles south-east of the Bermudas, it may not be out of place to state here, that the fact was developed during the discussion of the subject of yellow fever by the Convention, that the Naval medical officer is not responsible in the least for the sanitary condition of the vessel to which he is attached; and that while the Plymouth lay in Boston harbor, I think, during the severe cold weather of last winter, yet no medical officer superintended the work of so-called disinfection to which she was subjected, and which consisted chiefly in the hatches being kept open, and the subsequent burning on board of her, of a large quantity of sulphur. It was due to the ignorance or inefficiency of those who used them, and not to the inadequacy or impotency of the means themselves, that the disinfection of this vessel was merely nominal, and that the fever re-appeared on board of her as soon as she reached warm latitudes.

A fever-infected vessel is essentially a filthy vessel in respect either of her hull, cargo, hold, cabins, crew or passengers, and effective means of cleansing or disinfecting such can always be found. A steamer carries with her potent means of disinfection in the form of steam, and an instance was related where the hold of a badly-infected war-vessel on the Mexican coast was so thoroughly cooked by means of super-heated steam, that no case of fever ever again developed on board of her, although she cruised in southern waters, and was frequently in contact with infection, for many years afterward.

The upholstering of railway coaches was viewed with disfavor by the Convention, as affording opportunity for the lodgment and transportation of the infectious principles of various diseases.

It was agreed that there should be a system of prompt notification to all members of the Council of any case of yellow fever in the South, and that there should be no suppression of facts; but that perfect candor and honesty should always obtain in this respect. A cipher telegram was first proposed, but was abandoned in favor of a letter which should be considered confidential by its recipient.

It may be not inappropriate to give here, a brief account of the formation, organization and object of the Sanitary Council, to which reference has been frequently made: This organization was formed in Memphis, on April 30th, last, in pursuance of a call to that effect, issued by the President of the Tennessee State Board of Health. There were present representatives from a number of State Boards of Health throughout the Valley, and from many of the principal cities and towns, including both medical and non-medical men. A constitution was adopted, and the title of "Sanitary Council of the Mississippi Valley" agreed upon, and the object of the organization stated to be, "to promote inter-state sanitation, and prevent the spread of epidemics." The object would have been better stated to be, to prevent the origin of epidemic diseases, by removing the local causes on which such diseases depend for existence and perpetuation, rather than merely to prevent their spread after they have attained epidemic impetus and power. It is for the purpose of aiding and giving intelligent and concerted direction to sanitary work throughout the Valley that it was formed, and it will be as much its object to prevent the occurrence of cholera or plague in the North as to prevent the recurrence of yellow fever in the South. It aims to secure uniformity and harmony in sanitary action throughout the Valley, and thus obviate any seeming necessity for sectional quarantine measures, such as might be hastily adopted in some localities under the influence of panic, fright, or unfounded fear.

It may be asked if this body possesses executive power, and the reply would necessarily be, that its functions are purely advisory. Executive authority resides in its members by means of powers delegated by State and Municipal governments to official bodies which they represent, and which powers can be

exercised within State lines; but such a body, in a purely advisory capacity, will be invaluable in systematizing and directing sanitary work, and if pending legislation should result favorably to the interests of the National Board, that body will be enabled to very materially assist the Council in the prosecution of its work. It is almost needless to say that the work in which these bodies are engaged received the approbation of the Section on State Medicine and Hygiene of the American Medical Association.

In conclusion, Mr. Editor, I must say, that I am conscious of having given but an imperfect outline of the proceedings of the respective bodies to which I was accredited, and if this communication has exceeded the prescribed length, the importance of the work in which these bodies are engaged, and its interest and value to the entire country, must be my apology for passing the allotted bounds. Respectfully,

GEORGE HOMAN, M. D.

ST. LOUIS, May 25, 1879.

BOOK REVIEWS AND NOTICES.

BOOK REVIEWS.

A PRACTICAL TREATISE ON SURGICAL DIAGNOSIS: Designed as a Manual for Practitioners and Students. By AMBROSE L. RANNEY, M. D., Adjunct Professor of Anatomy and Lecturer on Minor Surgery in the Medical Department of the University of New York. *Wm. Wood & Co.* 1879. 8vo., pp. xii.-386.

This work is commendable for two reasons: First, its facts are brought down to our latest knowledge of the subjects considered; and second, the contrasts are placed side by side in columnar form, thus affording rapidly and at a glance, the points of differential diagnosis. By reading *across* the page, the contrasts become prominent; while, by reading from above, *downwards*, the symptoms of each disease are reviewed separately. We can afford no better idea of the work, and at the same time illustrate what we have already said, than by quoting a paragraph, as one would try a cheese, by taking a sample from its centre.

The term "VARICOCELE," (page 223), is used to designate a

varicose condition of the spermatic veins within the scrotum; while the term "CIRSOCELE" is used to denote a varicose condition of the veins of the cord and testicle. The terms are, however, often used synonomously, to express any abnormally varicose condition of the spermatic veins, independent of the location affected.

In this disease the venous coats are thickened so as to resemble arteries in their structure, and their course is rendered tortuous and irregular. The calibre of the veins is increased by dilatation of their coats, and the apparent number of the veins is largely increased by the distension of the venous capillaries.

The disease is most frequent upon the left side, the proportion being nearly twenty to one. The causes of this excessive frequency upon the left side have been thus explained.

1st. The left testicle hangs lower in the scrotum, and thus the veins of the left side support a heavier column of blood. 2d. The spermatic veins of the left side are pressed upon by the sigmoid flexure of the colon when distended. 3d. The spermatic vein of the left side joins the renal vein at a right angle to the current of blood, thus impeding the rapid return of blood from the left testicle. 4th. The left spermatic vein is by some authorities stated to be poorly supplied with valves; but the anatomical accuracy of the statement is questionable.

Varicocele as a disease may result from—

A. Causes which *impair the general vigor* of the parts. Under this head may be included: 1, Masturbation; 2, Abuse of venery; 3, Chronic orchitis, or repeated attacks of acute orchitis; 4, Lack of proper support from a relaxed scrotum.

B. Causes producing varicocele from *pressure*. Under this head may be included: 1, Abdominal tumors; 2, Enlarged lumbar or inguinal glands; 3, Hernia; 4, Trusses, or belts worn around the waist; 5, Accumulation of fat in the omentum and mesentery.

C. Causes producing varicocele by *muscular effort*. This class of causes may include: 1, Prolonged riding on horseback; 2, Prolonged rowing; 3, Prolonged exercise in running, waltzing, etc.; 4, Excessive and violent muscular efforts; 5, Whooping-cough.

Varicocele occurs most frequently at the time of puberty.

If due to mechanical pressure, it is most frequent in those advanced in life. It is a very common affection, and is indicated

by a tumor possessing the appearance and feel of a "bag of worms," associated with a sense of weight, and local distress, which increases as night approaches, from the relaxation of the scrotum.

A sense of immediate relief is present after coition, but a severe exacerbation of the symptoms follows during the succeeding twenty-four hours.

Varicocele is to be diagnosed from scrotal hernia, with which it has many points in common.

VARICOCELE.	SCROTAL HERNIA.
PALPATION.	
The tumor is knotty and irregular and feels like a "bag of worms."	The tumor is usually smooth on its surface and regular in its outline.
COLOR OF INTEGUMENT.	
A bluish tint is usually apparent.	The integument is normal in color.
LOCATION.	
Is most frequently on the left side.	May exist on either side.
EFFECTS OF HEAT.	
Tumor increases on the application of heat.	The effects of heat upon the tumor are negative.
DEVELOPMENT.	
Gradual.	Sudden.
PERCUSSION.	
A dull percussion note exists over the tumor.	Resonant percussion usually exists.
FLUCTUATION.	
May exist if the vessels be very large.	Never exists.
SPERMATIC CORD.	
Not affected.	Concealed or displaced.
INGUINAL CANAL.	
Uninvolved.	Usually filled.
COUGH IMPULSE.	
Absent.	Usually detected.
REDUCTION.	
Reduces often spontaneously by any position favoring increased venous return.	Reduction is usually accomplished by taxis alone.
RETURN OF TUMOR.	
The tumor returns when the patient stands up, in spite of pressure at the ring.	The tumor, if once reduced, can be prevented from a return by pressure at the external ring.

SENSATION IN SCROTUM.

A sense of weight and constant dragging in the scrotum exists.	There is a sense of distension only, unless inflammation or strangulation exist.

And so each surgical subject is taken up and its diagnostic points treated of, full and complete. The contents include Diseases of the Blood-vessels, of the Joints, of Bone, Dislocations and Fractures, Diseases of the Male Genitals, of the Abdominal cavity, and of Tissues, with full Index and Bibliography of Authors.

A most valuable and important book for senior students and practitioners, especially those making any pretension to Surgery.

While the old aphorism, "Qui sufficit ad cognoscendum, sufficit ad curandum," is not strictly true, yet the knowing is the first and most important step towards the curing; and thus the value of aids like that we have been considering.

A. J. S.

A Clinical Treatise on Diseases of the Liver. By Dr. Fred. Theod. Frerichs, Professor of Clinical Medicine in the University of Berlin, Etc.; Medical Privy-Counselor and Medical Advisor to the University of Public Instruction and Medicine at Berlin. In three volumes. Translated by Charles Murchison, M. D., F. R. C. P., Physician to the London Fever Hospital, Lecturer on Pathological Anatomy, and Assistant Physician at the Middlesex Hospital. *New York: William Wood & Co.*, 27 Great Jones Street. 1879.

Through the kindness of the publishers, we have received the three volumes of this now standard work on diseases of the liver. The present publication is an American reprint of the English translation by Dr. Murchison, which was published as long ago as 1860, and it is through the enterprise of Messrs. Wood & Co. that this valuable treatise is placed within the reach of American practitioners.

It is almost out of place for us to give a review of so old a book as this, and it would seem that by this time every well-informed man in the profession ought to be familiar with the views of Frerichs in regard to the diseases of the liver; nevertheless we doubt whether any but a small portion of our American readers have ever seen the English translation, or know anything more of the author's opinions than what they

may have gathered from occasional quotations and extracts in the current medical literature of the day.

To dwell upon the valuable addition to the literature of the subject (diseases of the liver) which this book constitutes would be a work of supererogation and the reiteration of a fact long since recognized, but we may be permitted to notice briefly the contents of the volumes before us, for the benefit of those who are not familiar with the work. In our opinion no more competent writer could have undertaken the translation of the work into the English language than Dr. Murchison, who has himself written so ably and instructively upon the various affections of this organ.

VOLUME I., Chapter 1. Treats of the history of the physiology and pathology of the liver, and of the present state of our knowledge, and of new questions for investigation.

Chap. 2. Of the relative size and weight of the liver in health and disease.

Chap. 3. Of the relative size and forms of the liver in its morbid conditions and of their diagnostic value.

Chap. 4. Of Jaundice.

Chap. 5. Of Alcohol and its consequences.

Chap. 6. Of Chronic Atrophy of the Liver.

Chap. 7. Of Fatty Liver.

VOLUME II., Chapter 1. Pigment Liver.

Chap. 2. Hyperæmia of Liver and its consequences.

Chap. 3. Inflammation of the Liver—its various forms, etc.

Chap. 4. The waxy, lardaceous, or amyloid dageneration of the liver.

Chap. 5. Hypertrophy of the Liver.

VOLUME III., Chapter 1. Treats of Pathological new formations—Hepatic Tumors.

Chap. 2. Diseases of Blood-vessels of the Liver.

Chap. 3. Diseases of the Biliary Passages.

The various subjects are abundantly illustrated with clinical observations and accounts of post-mortem appearances, assisted by a number of very well executed wood cuts.

P. G. R.

BOOKS RECEIVED.

DEMONSTRATIONS OF ANATOMY. Being a guide to the knowledge of the Human Body by Dissection. By GEORGE VINER ELLIS, Emeritus Professor of Anatomy in University College, London. From the Eighth and Revised English Edition. Illustrated by 249 engravings on wood. *Philadelphia:* Henry C. Lea, 1879. 8-vo. pp. 716. Cloth, $4.25; leather, $5.25. (Through St. Louis Book and News Co.)

PARESIS OF THE SYMPATHETIC CENTERS from over-excitation by high solar heat, long continued and suddenly withdrawn, etc. So-called malaria, its etiology, pathogenesis, pathology and treatment. By Chas. T. Reber, M. D. *St. Louis:* G. O. Rumbold, 1879, 12-mo., cloth, pp. 116.

SOCIETY PROCEEDINGS.

AMERICAN MEDICAL ASSOCIATION.

FIRST DAY.

The Thirtieth Annual Meeting of the National Medical Association took place at Atlanta, Ga., Tuesday, May 6th, 1879; convened at the Opera House, and was called to order at 11, A. M., by the President, Dr. Parvin.

After prayer, from Rev. Dr. Gwinn, the Chairman of the Committee of Arrangements, Dr. J. P. Logan, welcomed the members of the Association to Atlanta in hearty and well-timed words:—

When the Association had met in other cities in times past, the different committees of arrangements had presented a long catalogue of attractions, which nature had spread out in beauty and grandeur, which art and science and benevolence had made conspicuous features, and which elegant and refined hospitality were able to exhibit; and his heart failed him when he thought how little and how few of all these Atlanta could at present offer. But, on the other hand, he "took heart and determined to welcome boldly to a city

of *great possibilities.*" He pictured what she had suffered in the past through the ravages of war and fire; how heroically her citizens had gone to work to rebuild and make better her desolate places, and how well, with a State behind fruitful in great and multiplied resources, she had arisen and come forward, not only in commerce and business and statesmanship, but in benevolence and philanthropy.

"To you, as physicians, it must be interesting to know that there is found an almost entire exemption from malaria and tuberculosis (originating in this region), as well as freedom from any apprehension of a visitation of the awful scourge to which so many of our southern towns have been subjected. Our gates have time and again been thrown wide open to the fleeing thousands, who have found safety from pestilence, and sympathy with misfortune; the benevolence involved, it may be, mixed with the selfishness that springs of a security from danger."

He dwelt on the present as being a favorable opportunity for the consideration of the yellow-fever epidemic, sanitary science, public hygiene, quarantine, etc.

"We are authorized to cherish the hope that your deliberations and kindly intercourse, at this session of your body, will result in lasting consequences, destined to elevate medical science to a still higher level and to increase public confidence in the claims of that dignified and humane calling, whose skillful and charitable contributions are so urgently demanded by the whole human family, from infancy to old age."

After the subsidence of the applause with which the address was received, the list of registered members present was called, —about 400 in all. Among them there were from Missouri, Drs. A. E. Donelan, St. Joseph; B. G. Dysart, Paris; W. C. Glasgow, St. Louis; Geo. Homan, St. Louis; W. Humphrey, Mexico; A. P. Lankford, St. Louis; T. B. Lester, Kansas City; H. H. Mudd, St. Louis; J. M. Richmond, St. Joseph; A. B. Sloan, Kansas City; A. J. Steele, St. Louis; F. W. Wesseler, St. Louis.

The President, Dr. Parvin, delivered the annual address, which was beautiful throughout, full of deep thought and analytical philosophy of medical science. Its glowing periods were delivered with a feeling which held the closest attention. Much applause accompanied and followed it. The closing quotation was:

"There is no death! what seems so is transition;
This life of mortal breath
Is but a suburb of the life elysian
Whose portal we call death."

The address was ordered to be published.

The *metric system* was reported on by Dr. Seguin, who briefly sketched the success of the system, and offered in conclusion a resolution declaring that the Association adopt the metric system, and that in future all correspondents adopt it, and that druggists and physicians endorse and promote its popular use:

Resolved, 1. That the Amer can Medical Association adopts the international metric system, and will use it in its transactions.

2. Requests that those who present papers at its future meetings employ this system in their communications, or reprints thereof.

3. Requests the medical boards of the hospitals and dispensaries to adopt the metric system in prescribing and recording cases; and that the faculties of the medical and pharmaceutic schools adopt it in their didactic, clinical or dispensing departments.

4. Requests the physicians familiar with the metric system to help their confreres and the druggists in its application; and the delegates present at this session to work up the acceptance of the metric system by their respective county and state societies.

5. Requests our president to name a metric executive committee, of which he shall be the ex-officio chairman, and whose task will be to give unity and rapidity to this metric movement.

On motion they were adopted.

A communication against the abolition of the duty on quinine created some sensation. There were cries of "No! no!"

The communication was tabled, and on motion of Dr. Roberts, of Nashville, the Association reiterated its request that congress remove the duty from quinine. There were some nays, but the ayes had it.

The next business was the address of Dr. Thomas F. Rochester, of Buffalo, N. Y., chairman of the section on the Practice of Medicine. The paper was a very able and exhaustive discussion of a subject whose importance cannot well be exaggerated. The author's style was clear, his research large and his thoughts fresh. The paper will rank among the best. The address was referred to its appropriate section of Practical Medicine.

An address by Dr. John S. Billings, of Washington, was next in order, but President Parvin stated, with regret, that Dr. Billings was too unwell to read his own paper, and that it would be presented by Dr. J. J. Woodward, of the United States Army. The paper was on State Medicine. It was a masterly treatment of a subject whose importance is just beginning to loom before the public. It explained fully the philosophy of the National Board of Health, and, as it came from one of its leading members, was heard with great interest. The necessity for a national quarantine, and its advantages, were fully expounded.

The paper was referred to the section on State Medicine, and a copy asked for publication.

Dr. N. S. Davis, of Chicago, made a report from a special committee on questions discussed by President T. G. Richardson, in his annual address of last year, which was received. They favored the amendments proposed for the present rules on prize essays. They recommended the expunging from section 3 all relating to prize essays, and to insert a clause declaring that there shall be four prizes of $250 for the best original contributions to medical knowledge. The chairmen of the sections on Practical Medicine, on Obstetrics, on Surgery and Anatomy, and on State Medicine, shall take charge of the competition and arrange its methods. The report was to lie over for action until next year under the rule.

It was received and the committee discharged.

The next business was the consideration of proposed plans of change in the plan of organization. The first was an amendment declaring that the committee on nominations should hereafter select the nominees only from those members of the association that are present.

A motion to table this amendment was made and carried.

An amendment offered by Dr. Maddox, to create a new section on genital and urinary organs, was read.

A motion to table it was made, and a rising vote asked. The yeas were 73 and the nays 78. Applause. The amendment then came up for discussion.

Dr. Davis said there was danger of making many sections which would not attract enough attention to make them interesting. Two sections had been consolidated yesterday, and he favored the trial of the new section proposed. If it did not work well it could easily be discontinued. He did not like the

idea of some men in going about from section to section to try and imbibe all without imparting anything.

Dr. Brown, of Texas, said the sections had too many long papers, and they were not made as interesting or as useful as they might be.

It was moved that the amendment be referred to the section on Surgery, with request that it report to the Association to-day. Agreed to.

Dr. N. S. Davis, of Chicago, offered an amendment to the code of ethics, declaring it to be against the code of ethics of the profession for any physician to teach or encourage any student of an irregular or exclusive system of medicine.

Dr. E. S. Dunster, of Ann Arbor, spoke in opposition to the amendment. He said he had no personal motive in opposing it or any desire to shelter himself from the responsibility of any past teaching. He said he wished to remain in the Association, but not even membership would be a fitting price for the abandonment of scientific convictions. He feared the amend ment would bring dishonor and disaster upon the profession. The code says medicine is a liberal profession, but this amendment makes it close and exclusive. The whole spirit of the amendment is opposed to the broad principle of true science. He attacked the amendment on various grounds—said it was impossible to enforce such a statute. It would be a dead-letter law, a reproach to the body that enacted it. A thorough enforcement of this law would close every clinic in the land. In nearly every clinic in large cities are found homœopathic students. He said in the leading homœopathic colleges text books by leading allopaths are freely used. This is teaching the students of an "irregular" system, as it is called and you can't help it. Legally, the amendment will be futile. If the student of an irregular system, as it is called, were to apply to a State school and be refused, he could obtain a mandamus in any State of this Union to give him an entrance and provide him tuition. What is the use of setting up limitations which cannot be carried out? He also argued the merits of the question. It is based on an assumption of a most fallacious character. It assumes that the teaching of the students of irregular systems will tend to build up these systems. This is folly. It declares that the teachings of science lead to error—a proposition to which no man in his senses will give his endorsement. Such a

principle, carried out, would prevent a minister of Christ from preaching the Gospel when there were atheists or sinners in his congregation. History has taught nothing plainer than that truth is the antidote and finally the victor of error. The argument was not only masterly in its logic, but was marked throughout by a liberality of view which is the honor of a true scientific man. Said he: "If rational medicine cannot triumph in such a contest she deserves to fall and be buried in dishonor." [Applause.] The address caused a sensation in the Association.

Dr. Davis said he did not wish to discuss the matter, but he would state the reasons which led to the report which proposed the amendment. The Association had taken the steps which made the amendment a necessary result of its action. The judicial council, as a committee, was ordered to report just such a clause. The amendment was the best that could be done. It did not follow that the committee favored the amendment. He said it would be repugnant to him to teach students of an irregular college who merely came in to catch what they could of his teaching. He admitted that there was a line beyond which the code of ethics could not be carried without coming in contact with State and municipal laws. Dr. Davis' remarks were sound, and fell upon attentive ears.

Dr. Pratt said the argument against the amendment was specious. It was the argument of those who wanted to make money by teaching irregular pupils and be considered ethical, while practitioners are considered non-ethical if they associate with such pupils after they become practitioners. He moved that the proposed amendment lie on the table until next year. Carried.

Dr. N. S. Davis, of Chicago, offered a brief but pointed report on Ozone, which was referred to the committee on publication.

The report on Necrology was presented by ex-President J. M. Toner, of Washington, the chairman of the committee.

The report on the catalogue of the National Library, by Dr. H. C. Wood, of Pennsylvania, was received. It stated that Congress had been induced at last to publish two of these valuable journals.

Dr. Woodward, of the Army, thanked the Association for the warm support it had given his collegue, Dr. Billings, in his efforts to complete a great and necessary work.

The next business in order was the presentation of a paper

on State Medicine, which Dr. Chaille, of New Orleans, had read in the section of State Medicine Tuesday afternoon. The paper took such a philosophical view of a great question that the section ordered it referred to the Association. Dr. Chaille's views are along with the most advanced theories on this subject. He appealed for the thorough establishment of a sound system of State Medicine, in which the General Government should regulate without interfering with any necessary powers of the State. He argued that it lay in the power of the American Medical Association to effect the reforms needed in the present condition of State Medicine. In England, State Medicine is easily and judiciously regulated by the influence of the British Medical Association on one central legislative power, while in America this power must be frittered away on the local legislatures of forty-eight States and Territories. He argued for a more permanent organization in minor medical societies and the consequent increased efficacy of the American Medical Association. His views of the powers of the General Government over medical matters, both as related to sanitary and moral questions, were very strong, and to some may have appeared radical. The thorough study which Dr. Chaille has given this question, and his known liberality of views on all subjects, make it certain that in this paper he does not go to any extreme which prudence would disapprove, nor did he advocate any principle by reasons which are not in sympathy with the general opinion of the most learned and patriotic men of our day and nation. The paper was pregnant with theoretic principles stengthened by sound practical suggestions. It was really one of the most practical papers of all the long list which came up at this session, and its reading in the section started a series of discussions on its propositions which its presentation to the Association will bring into much fuller view. The paper was referred back to the section where it had been first presented.

Dr. Moses Gunn, of Chicago, chairman of the section on Surgery and Anatomy, advanced to the desk and delivered an address worthy of his high position in the profession. Though the paper was long, it held the closest attention of the entire association. The paper treated of "pus." It gave the most advanced theories on the question and the discoveries of its true nature in all of its various exhibitions. There were many valuable suggestions and they were put with beautiful clearness.

The paper was referred to the section on Surgery.

The committee on nominations presented the following:

President—Lewis A. Sayre, of New York.

Vice-presidents—

First—R. Beverly Cole, of California.

Second—E. M. Hunt, of New Orleans.

Third—H. O. Marcy, of Massachussetts.

Fourth—F. Peyre Porcher, of South Carolina.

Treasurer—R. J. Dunglinson, of Pennsylvania.

Librarian—Wm. Lee, District of Columbia.

Committee on Library—Johnson Eliot, District of Columbia.

Assistant Secretary—Walter Gillette, of New York.

Next place of meeting—New York.

Committee of Arrangements—Drs. L. O. Vanderpoel, Stephen Smith, William M. Polk, Robert Weir, Charles I. Pardee, A. A. Smith, T. F. Sabine, of New York; Joseph Hutchinson, of Brooklyn; M. H. Burton, of Troy, and Dr. Parker, of Poughkeepsie.

Committee on Publication—Drs. W. B. Atkinson, T. M. Dugsdale, A. Fricke, S. D. Gross, Caspar Wistar, R. J. Dunglinson, of Pennsylvania, and William Lee, of District of Columbia.

The following nominations for chairmen and secretaries of sections of 1880 are reported:

1. Practice of Medicine, etc.—Dr. J. S. Lynch, of Maryland, chairman; Dr. W. C. Glasgow, of Missouri, secretary.

2. Obstetrics, etc.—Dr. Albert Smith, of Pennsylvania, chairman; Dr. Robert Battey, of Georgia, secretary.

3. Surgery and Anatomy—Dr. W. T. Briggs, of Tennessee, chairmain; Dr. J. Powell Adams, of Minnesota. secretary.

4. State Medicine, Medical Jurisprudence, etc.—Dr. James F. Hibbard, of Indiana, chairman; Dr. T. F. Wood, of North Corolina, secretary.

5. Ophthalmology, etc.—Dr. Bolling A. Pope, of Louisiana, chairman; Dr. Eugene Smith, of Michigan, secretary.

Committee on Necrology—Dr. J. M. Toner, District of Columbia, chairman; Dr. J. M. Richmond, for Missouri.

On State Medicine—S. S. Mudd for Missouri.

On motion, the report was received and the nominations endorsed.

The next business was the reading of an address by Dr. E. S.

Lewis, of New Orleans, chairman of the section on Obstetrics, etc. The paper was a purely scientific treatise of the latest advances in this great department of medical science. A wide scope of personal experience, together with a large fund of learning, made the address admirable and interesting.

Dr. Chaille, of New Orleans, offered a resolution that Congress be petitioned to allow any student of scientific pursuits to import free of duty any one book for his own use. Adopted.

Dr. Brodie, of Detroit, referred to the judicial council a query as to the propriety of the use of patent medicines, and a resolution declaring such use against the code of ethics.

Some amendments were laid over to next year.

Reports were read from all the sections.

The president appointed the following committees:

To represent the Association abroad—Drs. Seguin, Yandell, Da Costa, Gunn, Turnbull, Warren and J. T. Hodgen.

Delegates to Canadian Association—Drs. H. Hutchins and W. Brodie.

On Dr. Chaille's resolution on public hygiene and its regulation by Congress—Drs. Pratt, Davis, Garcelon, Gross and Bell.

The address of Dr. Herman Knapp, of New York, chairman of the committee on ophthalmology, was next in order. The address was read and referred to the committee on publication.

The committee on prize essays reported only one essay for a prize. This was written by Dr. McLane Hamilton, of New York, and was on the subject of "Primary and Secondary Degeneration of the Lateral Columns of the Spinal Cord." The committee highly commended the essay and recommended that a prize of $100 be awarded for it. An essay on "Explorations in Physiology" was highly commended, but the second prize was withheld.

Dr. N. S. Davis, of Chicago, said it gave him peculiar pleasure to offer one resolution. He then read a resolution of thanks in which he expressed the hearty gratitude of the Association to the various railroads in the country who had extended favors, to the Ocean Steamship Company, to the local press for courteous attention and accurate reports, to the committee of local arrangements, to the medical fraternity of the city, and last, in glowing language, to the people of "the Queen City of the Empire State of the South," as the resolution termed Atlanta.

The resolution was adopted by an unanimous rising vote of the Association.

The last business in order was the installation of the new officers.

Dr. Lewis A. Sayre, of New York, the president-elect, came forward, and Dr. Theophilus Parvin, of Indianapolis, thus addressed the body:

"Gentlemen of the American Medical Association: Less than one year ago we met in a great city of the Empire State of the North. To-day we are to part in a great city of the Empire State of the South. Then we stood where we could almost hear the roar of the Niagara. To-day we are in this beautiful city, with its kind hearts, its profusion of lovely flowers, its warm welcomes, sweet as the spring-time air. Here in the gladness of spring, with its buds and its blossoms, its beautiful emblems, speaking to us of life and resurrection of life.

"One year ago you honored me. I thank you for it. I have not disgraced that honor, though I am aware I have not fully met its requirements. To-day I resign the chair to one whose name is not only known throughout our own land, but is recognized and honored abroad wherever the fame of American surgery has reached, Dr. Lewis Sayre, of New York, the President of the American Medical Association, of America."

Dr. Sayre, in acknowledging the compliment, said:

"Gentlemen, I cannot fully express to you the sense of my appreciation of the honor you have conferred on me. I think no man can hold a higher or more honorable position than that of President of the American Medical Association. Oh, that I had the tongue of a Parvin or a Grissom! that I might speak to you as I feel. But I cannot express that which fills my heart. I thank you for the honor, and will perform the duties as best I can."

Dr. Parvin then said to the Association: "The hour of adjournment is now at hand. I wish you many happy returns of the occasion which is now passing from us; happy returns to your loved ones at home, and long life and prosperity to you all."

Adjourned, to meet in New York, June 1, 1880.

MEETINGS OF THE SECTIONS.

MEDICAL.

DR. ROCHESTER, *Chairman;* DR. GLASGOW, *of Missouri, Secretary.*

Dr. Davis, of Chicago, read a paper on Clinical and Meteorological Records.

Dr. Dennison, of Denver, sent on a paper entitled "Experience of Consumptives in Colorado, and some of the Aero-hygienics of Elevation above the Sea, with Conclusions."

Dr. Dennison not being present, Dr. Davis, of Chicago, read the paper.

The paper was a very long one, and before Dr. Davis had half finished the reading he was informed by the Chairman that his time was out.

On motion, Dr. Davis was allowed time to read the conclusions.

Dr. O'Reilly, of New Orleans, moved that the paper be received, and referred to the committee on publication.

This motion was objected to by Dr. ——, of Mississippi, who said he thought if the paper was secured and referred, it would seem that the Association accorded with Dr. Dennison's views as expressed in the paper.

Dr. Davis, of Chicago, said he could see no reason why the paper should not be received and referred; that it contained valuable facts that were well worthy of publication, and it should be published.

The motion to refer it to the committee was then passed.

Dr. Dennison asked that the section recommend the Signal Service bureau to prepare charts to publish with the paper.

On motion of Dr. O'Reiily, of New Orleans, the recommendation was granted.

The paper of Dr. L. D. Bulkley, of New York, on the use of water in the treatment of skin diseases, being in order, was then presented, and read by Dr. Bulkley in clear and forcible style.

The paper was discussed by Dr. Porcher, of Charleston, and Dr. Shoemaker, of Philadelphia.

The address of Dr. Thomas F. Rochester before the general session was referred to this section, and was here presented by the secretary.

Dr. Rochester called Dr. Lester to the chair.

Dr. Hopkins, of Georgia, moved that the address be received and referred to the committee on publication.

This brought out quite a discussion, which was engaged in by Dr. Lyon, of New Orleans; Dr. Porcher, of Charleston; Dr. Banks, of Griffin, Ga.; Dr. O'Reilly, of New Orleans; Dr. Rochester, of Buffalo, and Dr. Foreman, of the army.

The address of Dr. Rochester was in favor of a national quarantine as a preventive of yellow fever.

Dr. Lyons, of New Orleans, said that the treatment of yellow fever was as well understood as the treatment of any other serious disease. That yellow fever does originate in New Orleans, and that there is never a year that there is not yellow fever in that city that originates there. Dr. Lyon contended that quarantine laws do no good, and as proof he said that during the late war, when there was not, and could not be any communication between New Orleans and the West Indies, there was not a single year but what there were cases of yellow fever in New Orleans.

He contended that the disease is not contagious, and that it will in future, as it has done in the past, continue to originate in that city. He believed in local sanitary measures instead of quarantine.

Dr. Hopkins, of Georgia, agreed with Dr. Lyon, that yellow fever was of local origin, and that quarantine regulations were useless in preventing the disease.

Dr. ——, of Texas, asked Dr. Lyon, if quarantine did not keep yellow fever out of Texas. Dr. Lyon replied that it did not, and asked the gentleman why it did not keep it out of Jackson, Mississippi, which was surrounded with men armed with shotguns.

The question was not answered.

Dr. O'Reilly, of New Orleans, said that in a large majority of years yellow fever will originate in New Orleans. He believed that proper sanitary measures will prevent epidemics in that city. He did not favor a national quarantine law.

Dr. Rochester said he had not treated a case of yellow fever in twenty-eight years. That he did not doubt but that there were occasional cases occurring sporadically in New Orleans, but that he believed that the quarantine would prevent the terrible epidemics.

Dr. Foreman, of the army, said that while the fever might

originate in New Orleans, there were cities where it did not originate, and we needed the quarantine against such places as the fever originated in.

The motion to refer the paper was carried.

The next paper in order was from Dr. G. F. Cooper, of Georgia, on "Veratrum Viride and its Uses."

The paper, though a long one, was listened to with marked attention by every one present.

Dr. Shoemaker, of Philadelphia, moved that the paper be referred to a sub-committee to be appointed by the chair. The motion was carried.

The second paper in order was one by Dr. Glasgow, of Missouri, on "Plastic Bronchitis," with cases. This was a valuable and interesting paper. On motion of Dr. Davis, of Chicago, the paper was referred to a special committee, to be appointed by the chair.

The next paper in order was one by Dr. Shoemaker, of Philadelphia, on "Inflammation of the Hair Follicles of the Beard."

This was an interesting paper, well read and well received.

On motion of Dr. Banks, of Georgia, the paper was referred to a special committee to be appointed by the chair.

There being no other business, the section adjourned.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

DR. LEWIS, *of Louisiana, Chairman;* S. BATTEY, *of Georgia, Secretary.*

Dr. Battey read a paper on Tubo-Ovarian Pregnancy, (case); operation at 5th month—death.

Dr. Cutter, of Massachusetts, presented a paper on Electrolysis of Fibroids.

Dr. Byford, of Illinois, presented a paper on Dysmenorrhœa.

Dr. Dunster of Michigan, presented his views on the operation of Perineo-raphy, which were favorably received and discussed by Drs. Pallen, of New York, King, of Pennsylvania, Smith, of Pennsylvania, Dowell, of Texas, Talliaferro, of Georgia, Cole, of California, and Parvin of Indiana.

Dr. Pallen presented a number of pessaries for the treatment of uterine displacements.

Dr. Campbell, of Georgia, exhibited a modified stem pessary for the treatment of uterine flexions.

The new gynæcological table devised by Dr. Chadwick, of

Boston, was presented by Dr. Marcy, of Mass. The doctor explained the workings of the table to the entire satisfaction of all present.

The chairman read the paper of Dr. E. Cutter, of Mass, (the author being absent) on: "The Treatment of Uterine Displacements by the Stem Pessary."

Next in order was Dr. E. B. Turnipseed, of South Carolina, on: "New instruments for the operation of vesico-vaginal fistula, with cases." The instrument, when complete, embraces the following: new self-retaining speculum; retractors; large apparatus (used in stitching) bearing a smaller comb-shaped apparatus set with needles, which are clamped when the operation is completed; curved needles, gold triple-plated, with hard rubber clamps, with springs; trimmers, with dilators on the principle of changeable values, and a hysterotome.

On motion of Dr. Albert Smith, of Philadelphia, the thanks and appreciation of the section were expressed to Dr. Turnipseed for his industry and mechanical genius.

The next paper was that of Dr. E. Cutter of Mass., the subject being the "Electrolysis of Fibroids." This was a highly interesting and very able paper, and on motion was referred to the committee on publication.

On motion, Dr. Pallen, of New York, presented large drawings of a lacerated perineum, and from these he demonstrated his mode of operating. He also spoke of the operation of amputation of the cervix, or as he proposes to call it, vaginocerviplasty, for the cure, as we may say in general, of sterility. His remarks were greeted with applause. The chairman appointed as a committee to examine the papers presented to the section, Drs. Dunster, of Michigan; Smith, of Pennsylvania, and Cross, of Arkansas.

The chairman called Dr. Bartlett to the chair, and the section took under discussion the annual address of the chairman, which had been delivered in the morning to the American Medical Association.

Dr. Smith, of Philadelphia, alluded to the changing of presentations and positions of the fœtus by external manipulation prior to labor. These changes can, in many cases, be effected with ease and advantage. His efforts to convert a posterior position of the occiput into an anterior one and maintain it, had been uniformly abortive. There is something peculiar in

these cases which makes them very obstinate. He did not feel that the question whether the cord is to be ligated early or late after labor an important one. His practice was to ligate as soon as pulsation in the cord ceased. He did not bandage the abdomen after turning the child in utero.

Dr. Marcy remarked upon Dr. Garland's method of treating prolapse of the cord by rotating the body of the fœtus in the uterus, and thus winding the cord around the body.

Dr. Morris doubted the propriety and success of these efforts to turn in the eighth or ninth month.

Dr. Lewis explained that the manipulation is then effected with greater ease and safety.

On motion of Dr. Warner, Dr. Battey was requested to return to the custody of the section the paper upon tubo-ovarian pregnancy, read by him Tuesday, and that the same be referred to the committee on publication.

Dr. Smith opened the discussion on the subject of pessaries. His experience and extended study of the subject, gave to his remarks a practical value which was fully appreciated.

Dr. Pallen differed from Dr. Smith *in toto* as to the ideology of displacements. He did not believe in the Hodge theory, to which it seemed that Dr. Smith adhered.

After further investigation and discussion, the section adjourned.

SURGICAL.

DR. GUNN, *of Illinois, Chairman;* DR. WEIST, *of Indiana, Secretary.*

Dr. A. C. Post, of New York, read a paper on deformities of face and hands occasioned by cicatrical contraction following a burn, with reports of cases successfully treated. The paper was very favorably received, and showed the great advancement made in this department of surgery. The following gentlemen participated in discussing the paper: Drs. Quinby, of N. J., Briggs, of Tenn., Dawson, of Ohio.

A paper was read by Dr. Marcy, of Mass., on "Aspiration of Knee-joint," with cases. The paper received attention. The following gentlemen discussed it: Drs. Byrd, of Ill., Post, of N. Y., Gross, of Phila.

Dr. Turnipseed, of S. C., read the following papers: "New Surgical Needle, Curved and Spring Clamp at Point;" "New Apparatus for Treating Fracture of the Clavicle," with cases;

"New Method of Reducing Dislocation of Elbow-joint," with cases. They were discussed by Drs. Dodge of Ind., Hughes, of Iowa, Gross, of Phila., Sayre, of N. Y., Dawson, of Ohio, Post, of N. Y., Glenn and Briggs, of Tenn.

Dr. C. V. Matham, of Kansas, read a paper on a "report of a case of chronic dislocation of hip-joint."

Dr. Dawson, of Ohio, showed specimens of calculi.

Dr. J. N. Quinby, of N. J., read a paper describing a case of conservative surgery.

Dr. Lewis A. Sayre read a paper on the proof of the value of the treatment of spondylitis or Potts' disease, by suspension and the retention in the improved position by the plaster-of-paris bandage. The paper was discussed by Drs. Maddux, of Md., Post, of N. Y., Marcy, of Mass., Dugas, of Ga., Quinby, of N. J., Byrd, of Ill., McGraw, of Mich., and Sayre.

The next paper was read by Dr. J. E. Link, of Ind., on "Amputations by Open Cone-Shape Method." The following gentlemen participated in discussing it: Drs. Beck, of Ohio, Marcy, of Mass., Byrd, of Ill., Quinby, of N. J., Garcelon, of Maine, Fuller and Link.

The next paper was read by Dr. H. E. Campbell, of Ga., on "Urinary Calculus, with consideration of its hygienic, etiological, pathological, and surgical relation; with 46 cases. It was discussed by Drs. Dawson and Mussey, of Cincinnati, and Dowell, of Texas.

The Secretary presented a paper for D. William Scott, entitled "Ecraseure for Removal of Uterine Tumors," invented by himself.

A paper was read by Dr. J. Weist, of Indiana, on the "Treatment of Hæmorrhoidal Tumors by Carbolic Acid Injections." The following gentlemen discussed it: Drs. A. C. Post, Byrd, Dawson, Quinby, Murphy, Brown, Smith and Cook.

The Secretary called attention to the action of the Association, in referring to this section the question of dividing the section.

After some discussion the resolution was withdrawn.

Dr. Maddux, of Maryland, read a paper concerning the nature of gonorrhœa.

Dr. Dodge moved that the paper be referred to the committee without discussion. Agreed to.

Dr. T. F. Rochester read a paper entitled "Perityphlitic Ab-

cess Opening into the Bladder and Rectum," with pathological specimen.

The next paper in order was by A. M. Pollock, of Penn., a new instrument for the administration of anæsthetics.

Dr. Lewis A. Sayre applied the plaster-of-paris jacket to two patients.

The section then adjourned.

MEDICAL JURISPRUDENCE, CHEMISTRY, PSYCHOLOGY, STATE MEDICINE AND HYGIENE.

Section called to order by Dr. J. T. Reeve, the secretary, who announced that owing to the temporary illness of Dr. John S. Billings, he could not be present. It was therefore necessary to appoint a chairman for the session of the section for the afternoon.

On motion, Dr. Cabell was unanimously elected chairman.

Dr. A. N. Bell announced the death of Dr. Wm. N. Compton, the former chairman of the section on Medical Jurisprudence.

Dr. Grissom paid an eloquent tribute to the memory and virtues of the deceased, who had died a sacrifice to the yellow fever, in which he had nobly labored for his fellow men.

The chairman appointed as a committee to prepare proper resolutions on the death of this esteemed physician, Drs. Grissom and Toner.

The first paper presented to this section was by Dr. H. A. Johnson, on the subject of the Regulation of Medical Practice by State Boards, as exemplified in Illinois. The paper was a full exposition of the thorough reform effected under the provisions of the new law. The thorough acquaintance of Dr. Johnson with the practical workings of this system made his paper of great value as a medical document. The paper was received with the thanks of the section.

Dr. Rauch, of Chicago, spoke fully of the success of the present system of regulation in Illinois, and the good it had accomplished to the people generally, as well as to the profession in elevating its grade.

Dr. Guion, of the United States army, believed in the thorough regulation of the practice by the State, in such a manner as to prevent quacks from imposing on the public simply because they could show a diploma.

The discussion on the question was protracted.

Dr. S. E. Chaille, of New Orleans, read an exhaustive paper on State Medicine and State Medical Societies, which held close attention and created an impression by its logical analysis of the question suggested. The paper was a masterly plea for State Medicine and its systematization as the only means by which government could perform its high duties to its people.

Dr. Bell moved that a vote of thanks be returned to the author of the paper. He spoke in very high commendation of it, and moved its reference to the general session.

The next paper was a very scientific thesis on "Psycho-physiological Hand," by Dr. E. Seguin, of New York. It was exceedingly interesting, and was closely attended by the joint session. The theory of the paper was that, in cases of idiots, all education of intellect must begin by education of the senses. He gave a most interesting case of education of an idiot by a Miss Meade, in New York.

Dr. Grissom presented a report from the committee appointed to draw a fitting memorial on the death of Dr. Compton, of Mississippi. The memorial was a beautiful tribute to the memory of the good and gifted man of whom they spoke. The memorial concluded with resolutions expressive of the regret of the section at the untimely death of this distinguished Mississippian, and declaring that his memory will be cherished with the virtues his life presented.

A paper on "The New Principles of Protective Sanitation in its Relation to Public Hygiene," by Dr. H. R. Storer, of Rhode Island, was next in order. The author was absent, but his paper was read to the section by Dr. E. S. Dunster, of Ann Arbor, Michigan. It occupied about forty minutes, and held close attention. It was full of historical knowledge and sound suggestions of true sanitary policy.

The paper was referred to committee on publication.

Dr. E. Seguin, of New York, made some remarks on the Intervention of Physicians in Education. His views were forcibly put, and were heard with attention by all.

The section took up some resolutions offered by Dr. Billings, that the American Medical Association recommend that every physician aid the superintendent of the census in his efforts to make up his statistics of mortality. That every physician make a record of all his cases from the first of June. Every physician in the United States will be furnished with blanks for filling out the reports asked. The resolutions were adopted.

Resolutions on the Organization of the Profession in all States were read. It was proposed to organize all members of the profession in good standing into county organizations. The section gave its approval to such a course whenever it may be deemed necessary.

Dr. S. E. Chaille, of New Orleans, presented a series of resolutions looking to the appointment of a Committee on Medical Organization. On motion the report was adopted.

The report of Dr. Chaille was referred to the committee on publication.

A paper on the Medical Examiner System of Massachusetts was read and referred to the committee on publication.

The report of Dr. Billings, of Washington, chairman of the section, on the question of Hospitals, was read. It was referred to the committee of publication, with instructions to consult with Dr. Billings as to the manner of publication, etc.

The report was accompanied by diagrams and lithographic illustrations of hospitals for small towns, on approved plans.

Dr. Alban S. Payne, of Virginia, offered a paper on the "Treatment of Small-pox in the Stage of Initial Fever."

The section then adjourned.

OPHTHALMOLOGY.

DR. H. KNAPP, *of N. Y., presiding.*

Dr. Calhoun, of Atlanta, was elected Secretary pro tem.

First in the order of business was the election of Dr. E. Williams, of Cincinnati, as honorary President, and Dr. B. A. Pope, of New Orleans, Vice-President.

The first paper was read by Dr. Williams; subject, "Ivory Bony Tumor of the Socket of the Eye."

Dr. Voorhees, of Memphis, then read an interesting paper on a case of "Great Impairment of Sight, produced by Poisonous Effects of Excessive Doses of Quinine."

The third and fourth papers by Dr. Knapp consisted of microscopic demonstrations and remarks on a large tumor (sarcoma) of the acoustic nerve from the practice of Dr. Stevens, of Albany, N. Y.; and, secondly, of a degeneration of the iris and ciliary body, probably of a tuberculous and syphilitic nature.

The meeting was concluded by an extensive discussion on

the symptoms, the course and the treatment of syphilitic diseases of the cornea.

The principal object for discussion was "the operation for cataract," on which extensive papers were read by Drs. Pope, Calhoun and Knapp. In the discussion twelve members took an active part.

A paper was presented by Dr. Reynolds, of Louisville, on "The Operative Cure of Cystoid Cicatrix following operations for Cataract and Glaucoma."

Dr. Smith, of Detroit, read a paper on the "Operative Cure of Xerophthalmia."

In conclusion Dr. Knapp presented two anatomical specimens, the one with plastic cyclitis, the other with a chip of brass lying in the ciliary body, and gave a brief history of the cases to which the specimens referred.

Another paper was read by Dr. Knapp. Subject: "Mastered Disease." The Doctor presented a fine number of specimens, and illustrated on the blackboard diseased changes of the eye-ball and ear. The paper was intensely interesting, and gave rise to a long discussion. Drs. Leartus Connor, Pope, Williams, Calhoun, Smith and Voorhees taking an active part.

After the subject had been thoroughly discussed, it was announced that all the papers of the section had been read and the work, so to speak, completed. The section, therefore, adjourned sine die.

GENERAL SESSION.

Appointed to represent the association abroad.—Drs. Seguin, Vandell, Da Costa, Gunn, Turnbull, Warren and J. T. Hodgen.

Delegates to Canadian association.—Drs. H. Hutchins and W. Brodie.

On Dr. Chaille's resolution on Public Hygiene and its Regulation by Congress.—Drs. Pratt, Davis, Garcelon, Gross and Bell.

The address of Dr. Hermann Knapp, of New York, the chairman of the Committee on Ophthalmology, was next in order. The address was referred to the committee on publication.

The committee on prize essays reported only one essay for a prize. This was written by Dr. McLane Hamilton, of New York, and was on the subject of Primary and Secondary Degeneration of the Lateral Columns of the Spinal Cord. The committee

highly commend the essay, and recommended that a prize of $100 be awarded for it. An essay on "explorations in physiology" was highly commended, but the second prize was withheld.

THE CONVENTION OF AMERICAN MEDICAL COLLEGES.

The Convention met, according to notice, at Atlanta, May 2d. The meeting was called to order by Dr. N. S. Davis, and the chair taken by Prof. S. D. Gross. Dr. Starling Loveing, of Columbus, Ohio, was elected secretary. A committee on credentials was appointed, who reported twenty-five colleges represented by one or more delegates.

Dr. N. S. Davis stated the object of the society to be the establishment of a uniform course of study, in accordance with the advanced state of medical science. One of the great objects of this Convention was to ascertain if all the colleges in the country could not be induced to take at least one step forward—a step which would require all medical students not only to study three full years, but also to attend three regular annual courses of college instruction. This point must be settled by the Convention. The students should also be required to furnish evidence that they are well educated in ordinary English branches. The latter point is as vital as the former. The doctor said both points were vital, and nothing less would do credit to such a body.

Dr. E. L. Dunster, of Michigan, favored the adoption of the course suggested, and said he spoke for the University of Michigan. That school would adopt such a course, no matter what the Convention should do.

Dr. Davis, of the Chicago Medical College, moved that a committee of five, on propositions, be appointed to bring matters before the body in regular form.

After some desultory discussion, this motion was carried, and the committee was appointed to report in the afternoon.

At the hour appointed the committee submitted the following report:

Your committee, after due deliberation, have decided to submit for the consideration of the Convention only two proposi-

tions, and those without any expression of opinion concerning their merits by your committee. The propositions are as follows:

First. That all medical colleges should require attendance upon three regular courses of lectures during three separate years, before admitting students to become candidates for the degree of M. D.

Second. That the medical colleges should require, before admitting to matriculation, a preliminary examination—such examination to embrace, at least, the elements of the physical sciences in addition to a fair English education.

All of which is respectfully submitted.

N. S. DAVIS, *President.*
J. T. JOHNSON, *Secretary.*

The report was received, and, after considerable discussion, was carried, by a large majority. It was also moved and carried that the report be referred to the Association of American Medical Colleges.

The Convention then adjourned *sine die.*

THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

The third annual meeting of this Association was held in Atlanta, May 3d.

At ten o'clock, Dr. N. S. Davis, of Chicago, vice-president, called the meeting to order. He announced the death of Dr. Biddle.

The following proposed additional section to the by-laws was presented:

Every college member and every affiliated college shall print each year a true list of matriculants of the college for the year, and their preceptors, or the names of the colleges at which the matriculants have graduated, in the cases of those matriculants who are graduates, and every such college shall also print a true list of the graduates for the year.

The object of this aditional section is to provide that every college member of the Association shall have proper means of

information with regard to the matriculants and their preceptors, and the graduates of each college.

This additional clause was adopted.

The charges against the Louisville Medical School were then read, and decided to be null, as they were not brought in the regular manner, and, moreover, the colleges in question had now so arranged their courses as to be free from the charge of irregularity.

The report of the committee on registration of medical colleges in good standing was read. It stated that there were fifty-nine regular medical colleges in the United States, and the grand total of their graduates for 1878, was 2708. The report was full and complete, giving a list of the colleges which were in the Association.

The total membership of the Association consists of twenty-eight active colleges; twenty of these have reported; there is one affiliating college; five colleges have joined since the last meeting; four applications are now pending.

The faculty of Dartmouth Medical College insisted on withdrawing from the Association, because they could not lengthen their term. Granted.

A resolution that gratuitous instruction to medical students, by any member of the Association, except as provided by law, be declared unlawful, was adopted.

The election of officers being in order, Dr. Samuel D. Gross, of Philadelphia, was nominated for president. Elected.

Dr. N. S. Davis, of the Chicago Medical College, was nominated for vice-president. Elected.

Dr. Leartus Connor, of the Detroit Medical College, was elected secretary and treasurer.

Next in order was the reading of a communication from the "Convention of Medical Colleges." At that convention the questions discussed were; (1.) Should all medical colleges require three regular courses of lectures in three separate years as one of the requirements for conferring the degree of M. D? (2.) Should all medical colleges require, before admitting to matriculation, a preliminary examination—such examination embracing at least the elements of the physical sciences, in addaddition to a fair English education?

The first of the questions thus referred was disposed of by an amendment to the articles of confederation, proposed by

Professor Menees, by which said question was answered affirmatively. Under the rules of the Association, the amendment was tabled till the next session. The second of the questions was laid upon the table for one year.

The following amendment to Act I. of the Articles of Confederation was then offered by Professor Bodine:

The majority of the members of one faculty shall not constitute the majority of the members of another faculty, unless the sessions of the two schools are held simultaneously.

The amendment was seconded, and under the rules lies over till next year.

Professor Chaillé called from the table the following resolution: That it shall be considered derogatory to the dignity and good standing of any medical college represented in the Association to advertise, in any other than a strictly medical publication, the names of its professors, with their respective chairs.

This resolution does not apply to the annual circulars and catalogues issued by the colleges, but to advertising in non-professional periodicals, newspapers and other like publications, in which only a card, calling attention to the advantages of the school, length of session, fees, etc., with the name of the executive officer or secretary appended, should be permitted.

After full discussion by Professors Chaillé, Dawson, Murphy, Lankford and others, the resolution was adopted.

Professor Chaillé offered the following amendment to the articles of confederation: "No college shall advertise in any other than a strictly medical publication the names of its professors, with their respective chairs." The amendment was seconded and laid on the table till next year.

After some formal proceedings the Association adjourned.

MISSOURI STATE MEDICAL ASSOCIATION.

FIRST DAY.

Morning Session.

The State Association convened in Columbia, Tuesday, May 20th, at half past 10 o'clock, a. m., in the University Chapel. An organization of the body was effected—Dr. E. W. Schauffler, of Kansas City, occupying the chair. The Rev. Dr. H. W. Dodge

offered an appropriate prayer. The Association then proceeded to the election of a President. Dr. G. M. B. Maughs, of St. Louis, was elected. The remaining officers were, by resolution, left to the committee on nominations, who reported as follows: For vice-presidents, A. W. McAlester, Columbia; C. Lester Hall, Marshall; W. H. Bryant, Savannah; C. A. Thompson, Jefferson City; C. N. Gerard, Shelbina; Recording Secretaries, A. J. Steele and W. E. Fischel, St. Louis; Corresponding Secretary, E. C. Evans, Sedalia; Treasurer, A. B. Sloan, Kansas City. The report was adopted unanimously.

Dr. B. A. Watson, the Mayor of Columbia, delivered a most hearty address of welcome to the hospitalities and freedom of the city, to its beauty, wealth, culture, and refinement; making by its earnestness, every one feel at home.

Dr. S. S. Laws, President of the State University, followed with a courteous speech, tendering the Association the use of the University, and all the conveniences and appurtenances pertaining thereto.

The committee on credentials and enrollment reported 102 members present;—St. Louis sending a larger delegation than ever before present on a similar occasion.

Afternoon Session.

The Association convened in the University chapel at 2:30 o'clock. Drs. Prewitt, Borck and Richmond reported on "The Progress of Surgery," and Dr. C. A. Todd read an able paper on "Laryngeal Growths—Importance of Their Early Removal."

The next paper was read by Dr. Hughes on "Tendon Reflex," who also read a shorter paper on the "Æsthesiometer."

Evening Session.

At 8 o'clock, p. m., the retiring President of the Association, Dr. Schauffler, delivered the Annual Address before the Association, in the Union Literary Society hall, an abstract of which would do injustice to the scholarly author, and fail to convey the meaning and force of the matured ideas advanced.

Among the subjects considered were: Dangers of popular scientific education; what can we do at home for the benefit of the profession at large, and how can we cause the people to respect the regular profession and scientific medicine even more than they do now?

The address was ordered printed, and the thanks and endorsement of the Association voted its author.

On motion of Dr. Steele, a committee of five was appointed to take measures looking to the establishment of a State Board of Health for Missouri.

Carthage, Jasper county, was selected as the place for holding the next annual meeting.

SECOND DAY.

Morning Session.

The Association convened in the Union Literary Society hall at 9:30 a. m., and after the usual formalities of reading minutes, &c., a resolution was offered by Dr. Johnson, of Jefferson City, and adopted, asking Congress to pass, without delay, the bill now pending before that body, placing quinine on the free list.

On motion, Dr. J. G. Norwood, Dean of the Medical Faculty of the University, and Dr. Wilson, of Sherman, Texas, were invited to seats in the body.

A paper on Epithelioma, and Amputation of the Hip, by Dr. Lutz, excited considerable discussion of a very interesting character.

Dr. Michel read a paper on "Purulent Ophthalmia and its Treatment," fully discussed; followed by Dr. A. J. Steele with a paper on Pseudo Hypertrophy Musculorum, with illustrations.

Afternoon Session.

The first paper read was presented by Dr. Dickinson, on Mydriatics and Myotics, followed by Dr. Bryant with a paper on The Differential Diagnosis of Bright's Disease; also by Dr. Hardaway with "Notes on the treatment of Skin Diseases," and Dr. S. S. Todd on Ancient Egyptian Medicine.

The committee on education reported the following:

Resolved, That in view of the greatly increased facilities for obtaining a liberal education now offered to young men of all classes, it is the opinion of this Association that the want of a fair degree of proficiency in the arts and sciences and general literature is inexcusable in any one professing to belong to any of the learned professions, more especially that of Medicine, and that the Missouri Medical Association earnestly recommend to the various Medical Colleges throughout the State, and elsewhere, the adoption of such measures as will insure to all their future graduates the possession of such literary and scientific attainments as will command that respect due our profession.

Adopted.

The President announced the following Standing Committees:

Arrangements.—Drs. Mathews, J. Bryant, Jr., and Geiger.

Credentials.—Drs. Miller, Wright and Moss.

Scientific Communications.—Drs. Hughes, Henderson and Taylor.

Progress of Medicine.—Drs. Alleyne, S. S. Todd and Allen.

Progress of Surgery.—Drs. Lankford, Dysart and Mudd.

Medical Education.—Drs. Laws, Bond and Fulkerson.

Ethics.—Drs. Essig, Kennard and Lenoir.

Publication.—Drs. Porter, Barret and Dickinson.

Appropriate thanks were returned to the profession and citizens of Columbia, and to Dr. Laws, President of the University, for the welcome, the hospitality, and favors extended the Association while in session.

Adjourned to meet at Carthage, May 18th, 1880.

THE BANQUET.

At night, all the members of the Association, by invitation, assembled at the Planter's House, where extensive preparations had been made to cater to their gastronomic wants. The commodious dining room was ablaze with light, and literally crowded with long tables weighted down with the substantials and delicacies of the season.

About 9 o'clock supper was announced. After due attention had been given to the demands of the appetite, the festivities of the occasion were heightened by toasts and responses.

The committee of arrangements had prepared the following:

1. "Missouri"—By W. F. Switzler, Columbia.
2. "Our Hosts"—Dr. J. M. Allen, Liberty.
3. "Medical Journalism"—A. J. Steele, St. Louis.
4. "Public Hygiene"—S. S. Laws, Columbia.
5. "What a Kansas City doctor thinks of Columbia"—Dr. S. S. Todd, Kansas City.
6. "Medical Associations"—E. W. Schauffler, Kansas City.
7. "Citizens of Columbia"—G. M. B. Maughs, St. Louis.
8. "Our University"—Col. E. C. More, Columbia.
9. "Progress of Medical Science in Missouri"—Squire Turner, Columbia.

Owing to the lateness of the hour, only the first, second and seventh were given, but these were sufficient to excite the utmost hilarity and good feeling.

Thus closed the eighteenth Anniversary of the State Medical

Association, successful in every particular, and long to be remembered.

Too great a meed of praise cannot be awarded the very efficient Committee of Arrangements of Columbia Physicians, through whose untiring exertions nothing was left undone which could add to the comfort and happiness of their guests.

STATE MEDICAL SOCIETY OF ARKANSAS.

This young but prosperous organization met at Little Rock, May 13; Dr. A. A. Horner, President, and Dr. R. G. Jennings, Secretary, with an attendance of over fifty members.

Dr. Hart, in his address of welcome, indicated that the chief design of their annual assembling was the advance of Medicine by the interchange of views on medical topics, the suggestion and discussion of new or important methods of treatment, and legislation for the guidance of the Society and its members. Not second in importance was the cultivation of the sentiment of comradeship. He vindicated an indulgence of pleasure at such times, greater than was usually allowed physicians in the midst of their daily avocations.

(We gather from the reports that have reached us, and from personal experience with our Arkansas brethren on similar occasions, that the fraternal expression of warm hearts was not wanting at the late meeting.)

The response of Dr. Dale, in behalf of the society, included thanks for the welcome, and indicated that, while there were differences of opinion among members of the profession throughout the State, and that while some were antagonistic to the Society, yet, instead of coaxing such or trying to settle outside personal matters in the Society, rather to make it so necessary to every true physician in the State that none could afford to remain outside of or disconnected with it.

The address of the President, Dr. Horner, had the ring of true metal in it. He referred to the recognition of their Society by the American Medical Association, which thus gave them equality with the societies of their sister States, advocated the establishment of a State Board of Health to prevent disease and protect the lives of the people; desired legislation to protect the people from quacks and travelling char-

latans, who each year carry enough money out of the State to defray the expense of a most efficient Board of Health for a dozen years; described the beauties and natural advantages of the State, which had been overlooked and unimproved by emigrants and settlers, and for which the profession were to an extent culpable; advised that the Society appoint a volunteer Board of Health, to act in case of emergency, or as they found need; urged the organization of county and local Societies, and insisted on the importance of harmony in the ranks of the Society and profession.

From the report of Dr. Linthicum, we learn that strenuous efforts had been made to have passed by the legislature three bills, one for the creation of a State Board of Health, one to regulate the practice of Medicine and Surgery, and one to establish a State Board of Pharmacy. But they all failed. The profession is not educated up to the demands of humanity in these matters. They have been derelict in their duty, and again the people do not appreciate the good desired to be done for them and are impassive.

Dr. Edwin Bently, U. S. A., submitted a report on Practical Medicine, inviting attention to the germ theory of the causation of disease.

A reception was given at Dr. Bently's quarters, U. S. Arsenal, and the Society was also entertained at the Penitentiary by Col. Zeb. Ward.

Officers chosen for the coming year: President, E. T. Dale; Vice-Presidents, W. M. Lawrence, J. B. Cummings, Albert Dunlap, J. T. Hamilton. Secretary, R. G. Jennings; Assistant Secretary, L. P. Gibson; Treasurer, A. L. Breysacher; Librarian, J. H. Lenow.

Place of meeting, Little Rock. Time, May 5, 1880.

In behalf of the committee on Vital Statistics, Dr. Jennings offered a most interesting and valuable report, giving the experience of the State in the last summer's epidemic of yellow fever, illustrating, we presume, the importance of efficient quarantine. The percentage of deaths in Little Rock during the year 1878, was a trifle over 14,—a creditable showing.

In accordance with the suggestion contained in the President's address, a committee of nine was appointed to act in the capacity of a State Board of Health, and to co-operate with the Mississippi Valley International State Sanitary Commission, of

which Dr. Breysacher was chosen President, and Dr. J. A. Dibrell, Jr., Secretary.

Dr. Shebley presented a paper entitled "Clinical Study, on the Etiology of Pneumonia," which gave rise to discussion, after which Dr. Dibrell presented four cases of amputation of the foot at different points with most excellent results.

We certainly must congratulate our brethren in Arkansas on their successful meeting, and would suggest that next year they appoint delegates to the Missouri State Medical Association, to be held at Carthage, May 18th, 1880. They will receive a hearty welcome.

KENTUCKY STATE MEDICAL SOCIETY.—McDOWELL MONUMENT.

The twenty-fourth annual meeting of this organization occurred at Danville, Ky., May 13th and 14th. It was the largest, (200 members being present,) and the most successful ever held, attributable doubtless, to the simultaneous occurrence of the dedication of the McDowell monument, which drew together members of the profession, not only of the State, but the country at large.

Committees very generally reported, and many very excellent papers were read and discussions had.

Dr. Dunlop, of Danville, was elected President for next year.

The address of the retiring President, Dr. Todd, was well received. The Society will meet next year in Lexington.

The dedication of the McDowell monument took place in Danville on the evening of May 14th. A handsome marble stone now marks the resting place of the "Father of Ovariotomy." Most interesting dedicatory exercises were held. The funds for the erection of the monument were mostly subscribed by members of the medical profession of Kentucky.

The exercises were held in the Second Presbyterian Church of Danville. An immense concourse was assembled within its walls.

The delivery of Dr. Gross's oration consumed an hour and a quarter, and was listened to with profound attention. The address was admirable, full and exact upon every point, and can not but be regarded as among the most important works of its

accomplished and painstaking author. The Society has provided for its immediate publication in a memorial volume of the exercises.

After Dr. Gross had finished, Dr. Sayre, of New York was called on. He said that in his *official* capacity, as President of the American Medical Association, it was his duty as well as pleasure, to bring to the monumental shrine the ovations of the entire medical profession of the United States.

Following Dr. Sayre Dr. D. W. Yandell read some of the letters which had been received by Lewis McMurtry and himself in answer to invitations to be present at the dedication exercises. These letters were from Mr. Spencer Wells, Thomas Bryant, Knowlsby Thornton, from abroad, and Drs. Thomas, T. G. Richardson, Parvin, and Oliver Wendell Holmes, in this country. Dr. Richardson's letter was particularly full and interesting, and Dr. Holmes's was highly characteristic of that poet and wit.

The exercises closed with the presentation of McDowell's door-knocker to Dr. Gross. It was given in the name of the Society as a memento of McDowell and of the occasion which had brought Dr. Gross to Kentucky.

Dr. R. O. Cowling made the presentation speech, feelingly and pathetically.

The address was received with sympathetic attention by the audience, who loudly cheered the sentiments of affection presented by the speaker. Dr. Gross appeared much agitated by the words addressed to him, and in his reply deeply stirred the feelings and affections of the vast audience.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, May 25th, 1879. Dr. C. A. Todd in the Chair.

TUMOR OF THE UPPER JAW—REMOVAL.

Dr. Gregory presented a tumor of the upper jaw, which, with Dr. Hodgen's assistance, he had removed about two weeks previous; he regarded it as an exostosis.

The patient was a woman some twenty-seven or twenty-eight years old; the tumor had been growing for nearly fourteen years; but until the last two or three the increase in its growth had been so gradual as hardly to be noticed. From this time it increased more rapidly till the time of its removal.

About a year ago it had pressed the palate process of the superior maxilla downwards into the mouth, and seemed to be pressing upwards toward the eye and inwards toward the nose. As interference became absolutely necessary, she consented to have it removed. In order to accomplish this it was necessary to cut through the malar bone and the palate and nasal processes of the superior maxillary.

An incision was made in the middle line of the upper lip, extending into the right nostril, and an attempt was made to remove the tumor after dissecting up this flap to the lower margin of the orbit. This however did not give room enough for the division of the malar bone, nearly half an hour being spent in unavailing efforts to pass the chain saw through the spheno-maxillary fissure. Accordingly, the incision was extended round the wing of the nose upwards toward the eye, and then outwards toward the malar bone; this bone was divided by a pair of pliers, and the tumor evulsed without any difficulty, with a pair of lion forceps.

At first there was considerable loss of blood; but during most of the operation there was very little hæmorrhage.

The result was very remarkable, as it seemed as if the scar would be almost invisible.

The doctor regarded the tumor as benign; an exostosis originating in the antrum of Highmore.

Dr. Gregory also related the following case:

FEMORAL HERNIA.

A few days since a man came into his office with a tumor in his right groin, which, at first blush, might have been supposed to be a bubonocele. It was somewhat tense, and seemed to be situated above Poupart's ligament. The patient stated that until now he had been able to reduce it, and had worn a truss. The doctor diagnosticated it to be a hernia; but was at a loss to know whether the neck was above or below the plane of Poupart's ligament,—whether it was an inguinal or femoral hernia. To decide this point he passed his finger into the inguinal canal, by invaginating the scrotum; no hernia was found in the canal, and thus by exclusion the diagnosis of femoral hernia was made.

Downward pressure was used; the tumor gradually yielded, and finally went back with a "flop." Dr. Gregory felt it distinctly passing back through the femoral canal.

This case was mentioned to illustrate the teaching that the

fundus of a femoral hernia rises above the plane of Poupart's ligament, and the method of diagnosticating, in the male, between inguinal and femoral hernia.

Dr. Carson: While on the subject of hernia, I will state that I operated in a case at the hospital for radical cure.

The patient was a young man twenty years of age, stoutly and compactly built. He was very anxious to be cured, and insisted upon the operation. The hernial protusion was very considerable, making a large scrotal tumor. I explained to him fully the uncertainties of the operation, but he insisted nevertheless.

We operated by cutting down directly on the ring and bringing its edges together by means of two silver wire sutures, including in them the arched border of the internal oblique, and the neck of the sack. Up to this date there has been no return. The patient, contrary to orders, gets up and goes about, and he says it gives him no trouble whatever.

Dr. Steele: Are the sutures still in?

Dr. C: No. They were removed fourteen days after the operation. (Since reporting the above the patient has presented himself with a return of this tumor. It is not large, however, but no doubt it will continue to increase in size. After leaving the hospital he went immediately to work, lifting, &c., without taking the precaution of adjusting properly the truss made for him.)

ŒSOPHAGEAL STRICTURE—SPASMODIC.

Dr. Glasgow: I would like to relate a case that has already been seen by several who are here present. I refer to the old lady who came out to the Sister's Hospital last Tuesday. Some of you will recollect having seen her last year about this time. She was then complaining of a difficulty in swallowing, and when I first saw her, stated that she had not taken anything for three weeks, except brandy and water in tea-spoonful portions. She was very much emaciated and could hardly walk.

On examination, I found a stricture of the œsophagus, about two inches below the larynx, and a second stricture immediately above the cardiac orifice of the stomach. It was with difficulty that a small-sized bougie could pass the upper stricture, and at first I was unable to pass any through the lower one. Bougies of gradually increasing size were used daily, sometimes well greased with belladonna ointment. Having recognized, by means of the laryngoscope, what seemed to be catarrhal inflammation

at the beginning of the œsophagus, I acted upon the supposition that the stricture was of spasmodic character, the inflammation being the exciting cause. I frequently passed a sponge saturated with a silver solution into the œsophagus. The catarrhal condition, as far as could be seen, subsided, but still there was persistent intermittent difficulty of swallowing. I then made an œsophageal electrode, by fastening a piece of sponge to a bougie, and passed it into the œsophagus, using the faradic current. After about six weeks of this kind of treatment, the largest-sized bougie could be passed, and solid food could be taken without difficulty. In addition, fluid extract of belladonna was frequently used as an external application over the larynx. I found that the occurrence of the stricture coincided very often with a costive condition of the bowels, and special attention was given to this condition.

She has just returned, and states that since last spring she has had no difficulty whatever, until about two weeks ago, when she noticed a difficulty of breathing, which at times developed into intense attacks of dyspnœa, continuing sometimes for days, a noticeable point being difficulty of inspiration and freedom of expiration, and also persistent cough, at times paroxysmal. There is now an enlargement on the left side of the neck, immediately above the clavicle, which is evidently an enlarged gland—it is about the size of a goose egg and very hard. A laryngoscopic examination shows intense congestion about the arytenoid cartilages. The dyspnœa being evinently due to spasm of the glottis, I was inclined to think that it might be due to a pressure on the nerves from some enlargement of the glands, similar to the one apparent in the neck, and probably malignant. To allay the cough, I made astringent applications to the larynx and had her use sedative inhalations, combined with the external use of fluid extract of belladonna to the larynx and trachea. This treatment was continued for a few days, with great improvement; she was also given a mercurial, and a mixture containing iodide of potash, of which she took one dose. On Saturday she came to the Hospital and I was surprised to find that the dyspnœa and cough had entirely disappeared, but she complained greatly of soreness of the mouth and fœtor, evidently due to salivation. The case is to me an interesting one as a case of spasmodic stricture occurring in an old person, where the age would lead us to expect malignancy.

The enlargement and hardening of the glands seemed to point that way. The spasm on both occasions was evidently due to the catarrhal inflammation, at one time affecting the œsophagus and again the larynx.

Dr. Gregory: It is said that soda prevents salivation, and this mercurial was combined with soda, was it not?

Dr. Glasgow: Yes, sir. It was a powder, containing 5 grains of calomel and 5 grains soda.

Dr. Todd: The condition of the bowels has a good deal to do with affections of the throat; a costive condition of the bowels will always aggravate such a condition as has just been described.

Dr. Boisliniere: That is the reason why purgatives are the best remedies in asthma.

PAPILLOMATA OF THE LARYNX.

Dr. Gregory: What became of the young lady with those papillomata which you removed successfully once or twice?

Dr. Glasgow: Twice. I saw her about a year ago, and she was perfectly well. Her voice was a little deep for a woman's voice, but the cords were perfectly clean. It will never return. I think, in the majority of cases, if the bases are thoroughly cauterized they will not return.

Dr. Gregory: These tumors are continuous hypertrophies. You cannot fix the limit of their base—the consistence of their bases does not differ much from the consistence of the tissues from which they grow.

Dr. Boisliniere: What are the symptoms?

Dr. Glasgow: Huskiness and a cracked or broken voice, which you can always recognize, once having heard it. If the tumor is large, there is apt to be more or less dyspnœa.

Dr. Gregory: It is one of the things you cannot describe; when you have once heard it, the moment you hear the peculiar sound of voice, a tumor is suggested.

Dr. Todd recalled the case of enormous laryngeal tumor exhibited to the society about a year ago with the laryngoscope. The tumor had been entirely removed—that is to say, all of it that could be seized with instruments, so that the larynx was free. The patient could use his voice again, though, on account of the enlarged vocal cords, it was husky. The growth, when first seen, fitted the cavity of the larynx to such an extent as to

leave but a small chink for respiration. It was remarkable that dyspnœa to a high degree had not occurred; as it was, the patient found respiration difficult at times, owing to its very extensive base. A complete removal has not yet been fully effected, so as to insure against recurrence. Applications of powerful astringents and escharotics have been made; still, fresh papillomatous excrescences will occasionally appear, necessitating renewed operation. This tendency to recurrence of papilloma of the larynx is not uncommon. MacKenzie, among recent writers, observes it. This unfortunate tendency will, of course, prove more confirmed and difficult to cope with, the more extensive the surface from which the growth takes origin—the larynx affording crypts and angles which effectually hide widely-spreading growths—hence the very great importance of early diagnosis, before time is allowed for unmanageable increase. Such a papilloma resembles closely epithelial cancer; indeed, we cannot always at once distinguish between the two.

ABDOMINAL TUMORS.

Dr. G. A. Moses:—I have had a case of abdominal tumor under my observation recently, occurring in a g rl about fourteen years of age, which is of interest. The girl is fair-haired and has a very fair skin—rather delicate looking, of German parentage. She was left an orphan when an infant, and was placed in an orphan asylum. Her parents, both mother and father, bore a bad reputation. She was taken from the orphan asylum by a person who had known her mother, and who brought her to her house to raise, when she was about five years of age.

At the time this person took the girl she says she was a delicate, puny, sickly child, with ulcers that were discharging freely—"deep holes upon the leg," one leg only, which discharged for several months. During this period she had also large cervical buboes; ulcers also appeared on the arms. Finally these healed and left no perceptible scars. About the same time she said she noticed a lump on the right side, immediately under the border of the ribs, and this lump has been gradually increasing. The general health of the child has been pretty fair until about six or seven weeks ago, when she became ill and had some diarrhœa and fever, the fever continuing for ten days. The guardian thought it was an ordinary malarial fever, and

gave her quinine, but she did not improve under it. Two physicians attended her until the acute stage seemed to pass off, but this tumor has steadily increased, until at the time I saw her it extended from the margin of the ribs on the right side and occupied the whole of the central portion of the abdominal cavity; so precisely central was the great protuberance that the first idea suggesting itself was the possibility of pregnancy, although in so young a person. It extended from above the umbilicus to the pubis, and the border was distinctly to be felt at every point of the circumference except at the right upper portion, where it seemed to be continuous as far as it could be reached above the ribs, though just across it there was a resonant line. The tumor was very painfully tender upon touch, very movable, and the whole abdominal parieties were movable over its surface, except just at the umbilicus, there it was immovable. The febrile movement at this time was nocturnal. There was no vomiting, digestion somewhat impaired, appetite moderate, the actions of the bowels were irregular, sometimes costive and then slightly loose. She said the actions had been colored a great deal. The pain gradually diminished. The girl had never had evidences of the menstrual flux, and except the growth of hair she has no evidence of puberty. But to leave nothing unexplored I examined the condition of the uterus; this is posterior to the tumor, and seems to be normal in every respect. I conclude that most probably the tumor is of syphilitic origin, but I cannot make out where it arises from if it is not from the liver.

The girl has gone home to-day, much improved in general condition; the tenderness has all disappeared and the tumor is neither larger nor smaller. I have had her under doses of iodide of potassium and quinine, which were continued until the fever was entirely arrested; and she is improved in general condition.

The whole history is scrofulous or syphilitic.

Dr. Boisliniere:—May it not be cancerous?

Dr. Moses:—It has not the appearance of that. She has now a healthy look.

Upon the subject of tumors of doubtful diagnosis, Dr. Hodgen reported the two following cases:

In the first case the patent was a man about fifty-five years of age. His attention was first attracted to the tumor in his abdomen by his friends speaking of his becoming corpulent, as the enlargement was not marked at any one point.

Dr. Hodgen examined the man with a good deal of care. Dr. Baumgarten also examined him. Dr. Hodgen supposed it to be a tumor of the liver, and as it was more distinct on the left side, and also as it seemed to occupy more of that side than of the other, he thought it probably began in the left lobe. There was no line of resonance above it; there seemed to be continuous dullness.

The patient went home, and a doctor in the country penetrated the tumor with an aspirator needle. It contained fluid, which was examined with the microscope for echinococci, upon the supposition that it might be an hydatid of the liver, but no parasites were found.

While the needle was in the tumor, the free end moved about, describing a sort of circle. The physician wrote for an explanation of this motion to Dr. Hodgen, who, still of the opinion that it was a tumor of the liver, replied that it might be due to the oblique contraction of the transverse muscles.

Shortly afterward the man died. It was found that the enlargement was an enormous cyst of the kidney, and that the needle had passed through the colon on reaching it.

In the second case the patient was a woman, who had an enormous tumor, supposed to be ovarian. It was very large when Dr. Hodgen saw it, and there were no means of determining from the history the manner of its growth. It gave the impression of being multilocular. Dr. Hodgen opened the abdomen, and ascertained that it was a growth involving the fatty tissue about the kidney, not the kidney itself, and was undergoing albuminoid degeneration.

Adjourned.

SOUTH-EAST MISSOURI MEDICAL ASSOCIATION.

The Third Annual Meeting was held at Charleston, May 6th, 7th and 8th. The Association was called to order by the President, Dr. C. A. Mann; Dr. A. A. Bondurant acting as Secretary.

The petitions of Drs. Rowe, Howle, Haw, and Pugh were received and referred to a special committee.

On motion it was declared that any regular graduate of a recognized medical college, was not only eligible for, but earnestly solicited to unite with this Association.

The committee on aforesaid petitions reported favorably, whereupon a ballot was taken which resulted in their election.

Dr. A. E. Simpson was nominated for President for the ensuing year, and duly elected. Dr. Wm. Nifong, Vice-President, A. A. Bondurant, Secretary, Dr. J. W. Cannon, Corresponding Secretary.

A vote of thanks was tendered Dr. C. A. Mann for the able and efficient manner in which he presided during his term as President of the Association.

Dr. W. S. Grinstead was elected a member.

Dr. Mann offered the following resolution, with some well-timed remarks. Drs. Henderson, Porterfield, Frazier and Simpson discussed the merits of the resolution :

Resolved, That in our intercourse and dealings with county courts, sheriffs, and the municipal authorities, as physicians, that any competition bidding, for the purpose of obtaining their patronage for less than a just and fair compensation, is in conflict with Article V, Section 9 of the Code of Ethics, and should receive the unqualified condemnation of all regular physicians.

It was adopted.

On motion, a vote of thanks was tendered Dr. Vineyard for his able report as Counsellor, and he was requested to furnish a copy of the same to the Society.

The report of Dr. P. R. Williams, as Counselor of Scott county, was presented.

Dr. Porterfield read a very interesting paper on Placenta Prævia, based on a case which he had treated. Discussed by Drs. Cline and Mann.

Dr. Cline reported two cases where the placenta was retained, both patients recovering.

Dr. Mann reported a cæsarean operation performed by himself. The patient died thirty-two hours after the operation. The case was an interesting one ; the pelvis was so small that it was impossible to turn or perform craniotomy.

The manuscript address of Hon. B. B. Cahoon, on Medical Jurisprudence, was read. A vote of thanks tendered.

Dr. T. F. Frazier reported a case wherein the os uteri was above the promontory of the sacrum, at full term of pregnancy.

Dr. Cline reported a case of ovaritis.

A. A. Bondurant read an essay on cholera infantum.

Dr. Henderson reported a very interesting case of spontaneous turning after the child's hand had protruded.

Dr. E. R. Harris offered the following resolution :

Resolved, That members of the medical profession who are located within the limits of the South-east Missouri Medical Association, and who fail to become members of this Association, shall not be invited to participate in the deliberations of this Society, nor its courtesies extended to them at future meetings of this Association.

Delegates to the State Medical Association, to be held at Columbia, Mo., May 20, 1879: Drs. John M. Rowe and R. T. Henderson; Drs. E. R. Harris and W. S. Grinstead, alternates.

The President appointed the following Counsellors for the ensuing year: Drs. G. W. Vineyard, of Perry county; E. R. Harris, of Cape Girardeau county; A. H. Miller of Bollinger county; F. R. Newberry of Madison county; John M. Rowe of Mississippi county; J. W. Hall of Wayne county.

The following were appointed to read essays at the next regular meeting:

Dr. S. E. Strong—On the Diseases of the Ear.
Dr. O. W. Cline—On Displacements of the Uterus.
Dr. C. G. Wilson—On Surgery.
Dr. J. H. Rider—Optionary.
Dr. T. F. Frazier—Optionary.
Dr. J. L. Haw—On New Remedies.
Dr. Wm. Nifong—On Obstetrics.
Dr. J. B. Sebastian—Optionary.
Dr. C. A. Mann—Public Address.
Dr. O. W. Cline—An Original Poem.

A resolution was passed inviting Hon. Joseph C. Moore, of Charleston, to address the Society at its next meeting at Jackson.

Drs. C. G. Wilson and J. W. Cannon were appointed a committee on arrangements.

Some eloquent remarks by Dr. C. A. Mann, in eulogy of Charleston, its citizens, and especially its medical fraternity, were made.

Drs. Rowe, Simpson and Haw delivered appropriate replies.

Joseph C. Moore and J. J. Russell each delivered short and eloquent addresses.

On motion, Dr. Cline read an original poem on the "Rise of Science."

Adjourned to meet at Jackson, Mo., on the first Monday in November next, at 7 P. M.

A. A. BONDURANT, *Secretary.*

LEWIS COUNTY (MO.) MEDICAL SOCIETY.

The Society met at Monticello, Mo., April 21st, 1879, Dr. R. S. Briscoe, of Lewiston, president, in the chair. Fifteen members were present.

Reading of the minutes were dispensed with, they having already been published.

Drs. C. P. Vincent, of Steffinsville, J. E. Hope, of Lewiston, and A. J. Magee, Tolona, were elected members.

Reading of the Code of Ethics of the American Medical Association, and the by-laws of this Society, was called for and read.

Dr. R. J. Christie, of Monticello, presented W. R., a case of chronic pneumonia, which afforded some very interesting and unusual symptoms. The history and treatment were given. The case elicited a general discussion on pneumonia.

Dr. W. S. D. Johnson, of La Belle, presented R. E., the case of hypertrophy of the heart which was before the Society in February. The case was examined by Dr. Christie, whose remarks were interesting and instructive.

Dr. W. S. D. Johnson presented Mr. S., a case of hypochondriasis with great lack of nervous force, the pulse often falling as low as 30 to 40 per minute.

Dr. Johnson also presented a son of Mr. S., a case of synovitis with anchylosis of the knee joint.

Dr. R. J. Christie presented a child, a case of talipes equinovarus, and gave the history of the case under treatment after the plan of Barwell and Sayre, and, to hasten the cure, proceeded to divide the tendo-Achilles, and to retain the feet in position with adhesive straps.

Dr. J. R. Lucas gave the history of a case of puerperal eclampsia, in which he had adopted a more heroic treatment than the case reported in the February meeting. In this case, after the first convulsion, he gave 30 drops of Norwood's tr. veratrum viride; in a half hour he gave 35 drops more. Another spasm coming on soon after, he gave a teaspoonful of the veratrum viride, which effectually quieted the spasms, and did not produce any alarming symptoms; and she made a good recovery. This case elicited a general discussion of the toxic properties of veratrum viride.

Dr. Lucas said that Stillé after giving the symptoms of an ex-

cessive dose, says: "Alarming and apparently dangerous as these symptoms are, it does not appear that they have terminated in death."

Dr. J. W. Hawkins said that he had good success with Dover's powders, and ice to the whole head.

Dr. J. R. Lucas gave the history of the case of Mr. T., aged 75, sick with pneumonia; he had three relapses, and after some unusual exertion, was taken suddenly with great dyspnœa; weak, irregular and frequent pulse; tumultuous cardiac distress. He diagnosed heart-clot. Ammonia was given freely, and in a few hours the thrombosis was dissolved, and the patient made a good recovery.

Dr. R. C. Risk was elected a delegate to the State Medical Association, with Dr. J. R. Lucas, of Canton as alternate.

The following officers were duly elected:

Dr. R. S. Briscoe, of Lewistown, President.

Dr. John W. Hawkins, Canton, Vice-President.

Dr. R. C. Risk, Williamstown, Secretary.

The following resolution was adopted:

Resolved, That we deem it the duty of every regular physician in the county to become a member of this Society; to aid in its deliberations for the education and elevation of the profession; to lend his counsel and experience for the general good. Those who may refuse so to do, will not be called or met in consultation after the regular meeting in June.

Adjourned to meet at Monticello, Mo., June 16th, 1879.

R. S. Briscoe, M. D., *President.*

R. C. Risk, M. D., *Secretary.*

MACON COUNTY (MO.) MEDICAL SOCIETY.

The Macon County Medical Society met on May the 7th, 1879, at Macon, Mo., according to order of previous meeting.

Members present—T. J. Norris, G. W. Miller, R. C. Mitchell, J. W. Proctor, W. V. Yates, J. W. Martin, W. F. Morrow and D. H. Matthews.

Dr. Miller presented the following amendments to the constitution:

1st. The Society may receive as honorary members, in the same manner as regular members, physicians of the regular

school, though not engaged in the active practice of their profession, or other gentlemen noted for their literary or scientific attainments, such members to enjoy all the rights and priv leges of regular members except holding office and voting.

2d. Druggists and students of medicine of the regular school recommended by a member in good standing in the society, may be received as junior members, to enjoy all the rights and privileges of regular members, except holding office and voting, and to be subject to the same discipline as regular members and to be received in the same manner.

The amendments were adopted.

The Board of Censors reported and recommended I. Frederick and F. W. Allen for membership. The same were voted upon and elected.

The following names were proposed by the Board as eligible to membership: J. M. McCulley, A. J. Morris, R. G. Powell, J. C. Scroggins, J. F. Campbell, E. J. Cantwell, Evan Jones, B. C. McDavitt, B. A. Payne, Mary Towner and H. W. Owen.

A motion was made to suspend the rules so that the above candidates should be received at once. The motion was unanimously agreed to.

The president read an able address before the society. Several very interesting clinics were exhibited during the meeting, and some lengthy discussions ensued.

A motion to select delegates to attend the State Medical Society was adopted. Drs. T. J. Norris, W. F. Morrow and G. W. Miller were chosen. A regulation was passed, "That in case a vacancy occurred in the delegation, the president should fill the same by appointment.

Dr. Campbell was appointed to discuss "Quiet in the Sick-room." Dr. McCully was chosen to discuss some medical subject.

A motion to meet on the 4th of June, at Laplata, Macon County, Mo., was adopted. Adjourned.

T. J. Norris, *President.*

D. Mathews, *Secretary.*

Note.—In connection with the above we would say that the inaugural address of the president of the Society, Dr. Norris, has been read by us with much interest. Replete with sound advice and high, honorable tone, we must believe that the future

of the profession of Macon is bright. With the adoption of such noble sentiments, and with such advanced members to look after and care for the profession, we shall always expect to find our Macon brethren in the forefront of medical progress. [ED.]

STATE MEDICAL SOCIETY OF KANSAS.

This Association held its thirteenth annual meeting at Atchison, May 13th, and continued in session three days.

The president, C. C. Furley, M. D., of Wichita, occupied the chair, and in response to addresses of welcome from Mayor Tomlinson and Hon. B. P. Wagonner, in behalf of the society, returned thanks in fitting terms, after which he delivered the annual presidential address, which was well received and heartily applauded. This was followed by a popular address from the well-known Dr. Tiffin Sinks.

The roster of members was called, and many new names proposed as candidates. Seventy-four members were received on recommendation of the board of censors.

Dr. Gish, of Valley Falls, read a paper on "Recent Advances in Chemistry." Dr. B. E. Fryer, Surgeon U. S. A., read a report on the "Recent Advances in Ophthalmogy." He also exhibited an appliance whereby Sims' speculum may be made self-retentive.

Dr. Carpenter read a paper on the "Use of Plaster of Paris Bandages in the Treatment of Fractures." Dr. Schenck gave interesting "Notes from Practice." Dr. Mottram reported a case of dislocation of the hip reduced after four months; also a fatal case of aneurism of the aorta. Dr. Morris related a case of puerperal mania treated successfully with chloroform, chloral and bromides; also a case of puerperal eclampsia, successfully treated with the same agents. Dr. Dougherty read a paper on parasites—tape worm in particular.

Dr. Tremaine, of the army, described Lister's antiseptic method. The use of thymol as an antiseptic was dwelt upon; also the eucalyptus globulus for the same purpose by Dr. Flood. Dr. J. M. Carpenter spoke of the antiseptic treatment of burns. Dr. W. B. Carpenter gave some of the results achieved in his practice.

Drs. Hunter and McCully spoke on the subject of yellow

fever. Drs. Todd, Freyer and Woodward read papers, and Dr. Osborne exhibited a surgical instrument devised by himself.

The committee on nominations consisting of Drs. Nealy, Hanawalt, Jones, Tremaine and J. M. Carpenter, reported for:

President, C. C. Furley; vice-presidents, J. H. Stuart, J. M. Linley; Secretary, F. D. Morse; Assistant Secretary, W. B. Gibson; Treasurer, W. W. Cochrane.

Board of Censors—Drs. Nealy, Mitchell, Jacobs, Haller and Dougherty.

Delegates to the National Association—Drs. Stormont, J. M. Carpenter, Hanawalt, Neely, Morris, Tremaine, Fuller, Schenck, Lanphear, Roberts, Halderman, Van Cuyn, Jones, Hepler, Haller and Shean.

Delegates to the State Medical Association of Missouri—Drs. Brookins, Mottram, Shelden, Boyd and Speck.

Delegates to the Medical Society of Colorado—Drs. Furley, Seymour, Buck, Lawrence and Robinson.

Report was received and unanimously confirmed.

The following appointments were made for next year:

J. M. Carpenter, to deliver a public address; Surgeon B. E. Freyer, on the history of medical delusions and quackery; A. P. Tenney was added to the committee on nervous diseases; Drs. Gross, Switzer and Hendrickson were appointed a committee on necrology; Dr. Freyer and the Leavenworth members, a committee of arrangements.

Drs. Stormont, Fryer, Schenck, H. P. Woodward, Morris, Baldwin and Shean, a committee appointed to nominate a State Board of Medical Examiners, reported as follows: Drs. Stormont, Cochrane, Furley, Morris, Nealy, Guibar and Halderman; alternates, Drs. Schenck, Roberts, Baldwin, Osborn, Sinks, Boyd and Leigh. Confirmed.

An appropriation of two hundred dollars was made towards paying the expenses of the board. Members of the Society were exempted from paying examination fees to the board.

Dr. Tremaine, in behalf of a special committee for the purpose, presented a resolution to the effect that the present medical law is wholly inadequate to properly protect the people of Kansas against empiricism, and that further legislation is this direction is necessary.

After the unanimous adoption of a resolution of thanks to the local profession, the citizens, the press, etc., the Society adjourned, to meet in Leavenworth, Tuesday, May 11, 1880.

In connection with the preceding we are pleased to give:

THE KANSAS MEDICAL BILL.

An act to regulate the practice of medicine in Kansas went into effect June 1st, 1879. Its main provisions are as follows:

SECTION 1. Every person in this State practicing medicine or surgery in any of its departments shall possess the qualifications required by this act. Every such person shall present his diploma to one of the board of examiners hereafter named, together with affidavit mentioned in section four of this act. If the board shall find all the facts required to be stated in said affidavit to be true, the board of examiners shall issue its certificate to that effect, signed by a majority of the members thereof, and sealed with the seal of the board, and such certificate shall be conclusive as to the rights of the person named therein to practice medicine and surgery in any part of this State.

SEC. 2. The Kansas Medical Society, the Eclectic Medical Society of the State of Kansas, the Homœopathic State Medical Society, shall each appoint annually a board of examiners, consisting of seven members.

SEC. 3. The boards of examiners shall organize within three months after the passage of this act. They shall issue certificates to all who furnish satisfactory proof of having diplomas or licenses from legally chartered medical institutions in good standing. They shall prepare two forms of certificates, one for persons in possession of diplomas or licenses, the other for candidates examined by the board. They shall send to the county clerks of the several counties of this State a list of all persons receiving certificates.

SEC. 4. Said board of examiners shall examine diplomas as to their genuineness, and if the diploma shall be found genuine as represented, the secretary of the board of examiners shall receive a fee of five dollars from each graduate or licentiate, and no further charge shall be made to the applicant; but if it be found to be fraudulent or not lawfully owned by the possessor, the board shall be entitled to charge and collect twenty dollars of the applicant presenting such diploma.

SEC. 5. All examinations of persons not graduates shall be made directly by the board, and the certificates given by the

boards shall authorize the persons to practice medicine and surgery in the State of Kansas.

SEC. 6. Every person holding a certificate from a board of examiners shall have it recorded in the office of the county clerk of the county in which he resides, and the recording of the same shall be endorsed thereon. Any person removing to another county to practice shall procure an endorsement to that effect on the certificate from the county clerk, and shall record the certificate in the county to which he removes, and the holder of the certificate shall pay to the county clerk the usual fees for making the record.

SEC. 7. The county clerk shall keep in a book provided for that purpose a complete list of the certificates.

SEC. 8. Candidates for examination shall pay a fee of five dollars, in advance.

SEC. 9. Examinations may be made, in whole or in part in writing, and shall be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner.

SEC. 10. Each of said boards of examiners may, from time to time, adopt such rules as may be necessary to the orderly conduct of all proceedings taken and had before it. It shall be the duty of the secretary of the respective boards to notify the secretary of all other boards provided for under this act, of all applicants to whom licenses have been refused, together with the reasons for such refusal by such boards.

SEC. 11. Any person shall be regarded as practicing medicine within the meaning of this act, who shall profess publicly to be a physician, and engage in the practice of medicine, or who shall habitually prescribe for the sick, or who shall append to his name the letters "M. D."

SEC. 12. Any person habitually practicing medicine in this State without complying with the provisions of this act shall be punished by a fine of not less than fifty dollars nor more than five hundred dollars, or by imprisonment in the county jail for a period of not less than thirty days nor more than one year, or by both such fine and imprisonment for said offense. And any person filing or attempting to file as his own the diploma or certificate of another, or a forged affidavit of identification, shall be guilty of a felony, and upon conviction shall be subject to such fine and imprisonment as are made and provided by the

statutes of this State for the crime of forgery in the fourth degree. *Provided*, that no person who holds a certificate heretofore granted by either of the societies mentioned in the second section of this act shall be compelled to procure a new certificate, or be liable to any penalty for failing to do so; *and provided further*, that the provisions of this act shall not apply to those persons who have been practicing medicine within this State continually for five years prior to the taking effect of this act. When such persons have submitted proof of such continuous practice, as herein provided, a certificate shall be issued to them, as is provided for in section 3 of this act.

THE METRIC SYSTEM IN MEDICINE.[1]

BY EDWARD SEGUIN.

MR. PRESIDENT AND CONFRERES—I told you at our last meeting that the International Medical Congress of Geneva, acting upon the proposition of the American delegates, had appointed a commission to report at the International Medical Congress of Amsterdam upon the possible progress of uniformity in medicine and pharmacy—each commissary having to report for his nation. Now I ask you what shall be our share in this report?

[The preliminary step towards international uniformity in medicine and pharmacy is the adoption of the International metric system, now accepted by all the nations except two, this country and England.]

(*a*) In this country, the metric agitation has been kept up by several publications, distribution of metres in all their forms, the action of metric bureaus and medical organizations; and the metric conversions of the last two years are too many to be all reported.

(*b*) The metric system was applied to all the branches of the U. S. Marine Hospital Service, and has worked well from the start, a year ago.

(*b*) The officers in charge of the vital statistics of New York, Boston, and other large cities, use the metric system, and com-

1 Read before and adopted by the American Medical Association, May 8th, 1879, at Atlanta, Ga.

plain of being obliged to convert into metric figures the fantastic weights and measures of the documents emanating from our profession.

(*b*) The Medical Society of the State of Pennsylvania, at its session of June, 1878, passed resolutions urging the use of the metric system upon its members, by the county societies, and that it be taught in the public schools.

(*c*) The Delaware county Medical Society voted the same resolutions, including the one relating to the public schools.

(*e*) The Medical Society of the State of Massachusetts was the first of all, I believe, to accept the metric system.

(*f*) The Rhode Island State Medical Society has voted the same, to take effect January, 1880.

(*g*) The Medical Society of the State of New York "requests of those who present papers at its future meetings, that the metric system be employed in their communications, and that this system be exclusively used in the public proceedings of this Society." (February 6, 1879.)

(*h*) The Medical Society of the county of New York resolved (March 24, 1879.) that "the metric system shall henceforth be used in the minutes of this Society, and in all the papers published under its authority."

(*i*) The Medical Society of Kings County, after hearing a paper of Dr. Edward Seguin on the use of the metric system in medicine, and the necessity of organizing a metric League, "appointed, (March 18, 1879.) a committee to consider these recommendations and report."

(*j*) The Georgia Medical Society, of Savannah, "takes pleasure in giving their moral support to the adoption of the metric system by the American Medical Association, and will put this system in practice in their city, (Savannah, April 23, 1879).

(*k*) I can recite the text of forty similar adhesions to the use of the metric system in medicine, but prefer to close these quotations by the terse expression of Dr. F. Morse, Secretary of the Kansas Medical Society. "We approve of the metric system, but we wait for the example of other States." This sentence contains in its kernel all the "internal" question of weights and measures.

As for the "foreign" and "international" question: (2) On the one hand the invitation of the International Medical Congress to join the other nations in a plan of "uniformity medical and

metric," is an opportunity to do fraternally what we would have to do soon on moral compulsion.

(*b*) On the other hand, England, whose stubbornness is partly responsible for our own supineness in the matter, begins to shake herself up.

(*c*) The *London Lancet* of November 23, 1878, gives a formal adhesion to the use of the metric system in medicine; and in its issue of February 1, 1879, expatiates on "The very great boon which would accrue to the medical profession by the introduction of metric weights and measures, and by the abandonment of the grotesque and obsolete system which is now in vogue."

(3) And the talented editor of the *British Medical Journal* wrote to me (February 4, 1879, London): "I hope I may be able to excite sufficient interest in the subject here to bring about practical measures. I shall be aided by your progress, and be glad to hear details. Shall you come to our Cork meeting to bring tidings of Metric progress?"

The significance of this letter is seen in the fact that the *British Medical Journal* is the organ of the British Medical Association.

Altogether, these public and private documents are warnings to the American Medical Association to accept the Metric System before the next meeting of the British Medical Association; no nobler rivalry than this being possible between England and this Republic. Considering that foremost in human interest is the uniformity of weights in prescriptions, which would prevent the grave or fatal results attending the composition abroad of medicine prescribed here; and the uniformity of measures which would give the possibility of writing observations uniform—that is to say, comparable at sight—with those of other nations. Then considering the possibility of mathematically accounting for the vital functions intrusted to the physician, in health at first, during their waste in disease, and in the course of their recuperation under treatment; and to make these individual records serve as mathematical elements of true medical statistics. Considering also—from a domestic point of view—that it is the duty of this Association to lessen and shorten the dangers inherent to the transition from one system of measures and weights to another; and that it will be highly creditable for this Association to have brought to bear all its force on such an important issue, I submit to you the following resolutions:

Resolved, 1. That the American Medical Association adopts the international metric system, and will use it in its transactions.

2. Requests that those who present papers at its future meetings employ this system in their communications, or reprints thereof.

3. Requests the medical boards of the hospitals and dispensaries to adopt the metric system in prescribing and recording cases; and that the faculties of the medical and pharmaceutical schools adopt it in their didactic, clinical or dispensing departments.

4. Requests physicians familiar with the Metric System to help their confreres and the druggists in its application; and the delegates present at this session, to work up the acceptance of the metric system by their respective county and State societies.

5. Requests our president to name a Metric Executive Committee, of which he shall be ex-officio Chairman, and whose task will be to give unity and rapidity to this metric movement.

MORTALITY TABLE.

CITIES.	ESTIMATED POPULAT'ON	DEATHS.	DEATH RATE PER 1000.
New York	1,095,365	*2,174	26.00
Philadelphia	901,380	*1,260	18.00
Brooklyn	564,448	*803	18.49
St. Louis	500,000	*367	9.50
Chicago	460,000	†592	12.87
Boston	375,476	*546	19.76
Cincinnati	280,000	*394	18.59
New Orleans	210,000	*398	24.75

* For the four weeks ending May 10th. † For the month of April.

ANNOUNCEMENTS FOR THE MONTH.

HOSPITALS.

CITY HOSPITAL, corner Linn street and Lafayette avenue—D. V. Dean, M. D., Superintendent in charge. *Clinical Lectures.*—MONDAYS, A. M., 9 to 10, Prof. Robinson, medical; 10 to 11, Prof. Lankford, surgical; 11 to 12, Prof. Michel, eye. WEDNESDAYS, P. M., 3 to 5, Prof. Smith, medical; 4 to 5, Prof. Hodgen, surgical, and Dr. J. Green, eye. THURSDAYS, A. M., 9 to 10, Prof. Bauduy, nervous system; 10 to 11, Prof. Lankford; 11 to 12, Prof. Michel. SATURDAYS, same as Wednesdays.

ST. LOUIS MULLANPHY HOSPITAL, corner Grand avenue and Montgomery street—In charge of the Sisters of Charity. *Clinical Lectures.*—TUESDAYS, A. M., 9 to 10. Dr. Pollak, eye, and Dr. G. A. Moses, diseases of children; 10 to 11, Prof. Gregory, (and Dr. Carson,) surgical; 11 to 12, Prof. Boisliniere, (and Dr. Moses,) diseases of females; 12 to 1. Dr. Glasgow, diseases of throat and chest, (and Dr. McCabe, medical). SATURDAYS, same as Tuesdays.

ST. JOHN'S HOSPITAL, corner Twenty-third and Morgan Sts.—Conducted by Sisters of Mercy. *Clinical Lectures.*—MONDAYS, A.M., 10 to 11, Dr. (Prof. Adj't.) Shaw, medical; 11 to 12, Prof. Prewitt, surgical; P. M., 2 to 3, Prof. Todd, diseases of the ear and throat, and Prof. Kingsley, diseases of children; 3 to 4, Prof. Papin, diseases of women. TUESDAYS, A. M., 10 to 11, Dr. Shaw, medical; 11 to 12, Prof. Prewitt, surgical, and Prof. Michel, diseases of the eye; P. M., 2 to 3, Prof. Kingsley; 3 to 4, Prof. Papin. WEDNESDAYS, A. M. 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Todd. THURSDAYS, A. M., 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Kingsley; 3 to 4, Prof. Papin. FRIDAY, A. M., 10 to 11, Dr. Shaw; 11 to 12, Profs. Prewitt and Michel; P. M., 2 to 3, Prof. Todd; 3 to 4, Prof. Papin. SATURDAYS, A. M., 10 to 11, Dr. Shaw; 11 to 12, Prof. Prewitt; P. M., 2 to 3, Prof. Kingsley.

ST. LUKE'S HOSPITAL, Tenth and St. Charles streets—*Episcopalian.—Clinics—Dispensary.*—MONDAYS, P. M., 2 to 3, Dr. J. Green, diseases of the eye and ear, and Dr. Wm. Porter, diseases of the throat and lungs; 3 to 4, Dr. Barret, diseases of women. TUESDAYS, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel, diseases of children. WEDNESDAY, P. M., 2 to 3, Dr. Green. THURSDAY, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel. FRIDAYS, P. M., 1 to 3, Drs. Green and Porter; 3 to 4, Dr. Barret. SATURDAYS, P. M., 1 to 2, Prof. Alleyne and Dr. Fischel.

U. S. MARINE HOSPITAL, Marine Avenue, near Carondelet Avenue.—*Clinics*, daily. Physicians and medical students invited.

ALEXIAN BROTHERS' HOSPITAL, Corner Jefferson Avenue and Osage Street.—*Clinics.*—Daily, at 10 A. M., Dr. Wesseler, medical; Dr. Lutz, surgical.

INFIRMARIES.

ST. MARY'S INFIRMARY, 1536 Papin street, under the charge of Sisters of St. Mary.—*Clinics.*—Daily, A. M., 9 to 10., Dr. Yarnall, diseases of women and children; 10 to 11, Dr. Holland, general and orthopedic surgery; 11 to 12, Dr. Hypes, medical. MONDAYS, WEDNESDAYS and FRIDAYS, 12 to 1, Drs. Gebser and Frazier, diseases of the eye and ear; 4 to 5, Dr. Stuever, diseases of the throat; TUESDAYS, THURSDAYS and SATURDAYS, P. M., 1 to 2, Dr. Hardaway, diseases of the skin.

MISSOURI EYE AND EAR INFIRMARY, 109 N. Eighth street—*Clinics.*—Daily, P. M., 1½ to 3, Drs. Gebser and Frazier, diseases of the eye and ear.

SOCIETIES.

ST. LOUIS MEDICAL SOCIETY, Polytechnic Building, corner Seventh and Chestnut streets, meets Saturdays from 8 to 10 p. m. Papers are read, morbid specimens exhibited, cases related, and discussions had.

MEDICO-CHIRURGICAL SOCIETY, 1615 Washington Avenue, meets on the second and fourth Mondays, the 9th and 23d of June, from 8 to 10 p. m. Subjects for discussion: Diphtheria, Croup and Erysipelas—their relations to each other; Fissure of the Anus.

St. Louis Obstetrical and Gynæcological Society meets Thursday, June 20th, at 8 p. m., at Dr. E. L. Feehan's, corner 22d and Pine streets. Subject for discussion, Nemological Aspect of Eclampsia.

Beaumont Medical Club, 1536 Papin Street, meets first and third Thursdays, the 5th and 19th of June, at 8 o'clock p. m. Papers on medical and kindred topics, and discussions.

NOTICES.

St. Louis Health Department. The Board of Health is now composed of the Mayor, Henry Overstolz; Health Commissioner, C. W. Francis; President of the Council, J. H. Lightner; Jos. Spiegelhalter, M. D.; W. B. Conery, M. D., and Police Commissioner L. A. Moffitt.

Superintendent of the Insane Asylum, Dr. N. DeV. Howard.

Superintendent of the City Hospital, Dr. D. V. Dean.

Superintendent of the Female Hospital, Dr. P. V. Schenck.

Clerk of the Health Commissioners and Board of Health, Dr. Robert Luedeking.

Sanitary Office, Dr. George Homan.

Assistant Sanitary Offices, Drs. J. H. Moore, R. H. O'Brien and Henry Remnitz.

Dispensary Physician, Dr. A. C. Robinson; Assistant, Dr. G. W. Carson.

The British Medical Association meets at Cork, Ireland, August 5th, 1879. American medical men abroad at that time will, if they are wise, strive to be present.

The Kansas City District Medical Society held its nineteenth quarterly meeting at Kansas City, June 5, 1879. Interesting essays were read on The Relations of Neuralgia of the Fifth Pair to Meningitis, by Dr. Lester; and Hysteria by Dr. Wilson.

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.	METRIC. Gms.
℞i. or gr. i. equals - - - -	06
℞xv. or gr. xv. equals - - - - -	1
f℥i. or ℥i. equals - - - - -	4
f℥i. or ℥i. equals - - - - - -	32

The decimal line instead of points makes errors impossible. A teaspoon is 5 Gms.; a tablespoon, 20 Gms.—*Metric Bureau*